J. Malac. Soc. Aust. 3(3-4): 127-156. 1 October, 1976.

OUTLINE OF CLASSIFICATION OF AUSTRALIAN TERRESTRIAL MOLLUSCS (NATIVE AND INTRODUCED)*

J. B. Burch

The Australian Museum, Sydney

SUMMARY

Iredale's higher classification of Australian land snails is reconciled to the better known classifications of Wenz and Zilch (in the *Handbuch der Paläzoologie*) as modified for the higher taxa by Taylor and Sohl. This classification for the endemic Australian fauna comprises two subclasses (Prosobranchia and Pulmonata, each with two orders), 14 superfamilies and 25 families (and additionally 4 superfamilies and 9 families which include the various introduced species). These higher taxa are used to classify the 204 genera and 40 subgenera of native Australian land snails as recognized by Iredale, and the 21 genera of introduced land molluscs. The genera and subgenera are listed for each appropriate higher taxon, but no attempt is made to assess their validity.

INTRODUCTION

The last comprehensive publications on the land molluscs of Australia were Iredale's (1937a,c, 1938) "A basic list of the land Mollusca of Australia," followed by his (1939) "A review of the land Mollusca of Western Australia" and (1940a, 1941a,b, 1942, 1943) "Guide to the land shells of New South Wales." Also, during the period of his "Basic list," he published (1937b) "An annotated check list of the land shells of south and central Australia." In these publications, Iredale recognized for Australia 42 families of native land molluscs, 204 genera, 40 subgenera, 758 species and 92 subspecies. Of these, 21 families, 165 genera, 27 subgenera, 202 species and 50 subspecies were named as new taxa by Iredale, most of which were not well defined. This, together with the splitting of taxa beyond the normal practice in malacology, has made the study of Australian land snails rather difficult.

The purpose of the systematic list of Australian land mollusc genera which follows is to adjust Iredale's higher classification to a better known, more widely accepted and more usable system. (Iredale's classification of Australian land snails to genera and subgenera can be found in Burch (1976).) The classifications followed in making this list were those by Wenz (1938-44) and Zilch (1959-60), as modified for the higher taxa by Taylor and Sohl (1962), and with the nomenclature adjusted to chronological priority of family-group names. A few minor additional modifications have been made following other more recent publications; these are noted where they occur. Since this outline is directed only toward the higher classification of Australian land snails, little attention is

---

***This paper is dedicated to my late son, John Bayard Burch, Jr., who over the years spent many hours with me in the field collecting land molluscs.**

paid to their lower classification (i.e., genera, subgenera, species and subspecies). Accordingly, many of the references, especially the early literature, which were not pertinent to the present outline, are omitted. Various sources can be consulted for many of these early papers (e.g., Iredale, 1936, 1958a, 1958b, 1959; Laws and Mincham, 1968; Macpherson, 1963; Smith and Macpherson, 1969; Richardson, 1971; Ponder and Stanbury, 1972; etc.). Iredale's "Basic list" also gives (in abbreviated form) nearly all the previous nomenclatural references.

This revision is carried down to the subfamily level. In brackets, following higher taxa names, are alternative names. The genera and subgenera of Iredale are simply listed (alphabetically under their respective families or subfamilies); no attempt is made to assess their validity (some, perhaps many, will eventually end in synonymy). Following each generic or subgeneric name, in parentheses, is the type species on which the genus is based. Iredale's families and superfamilies, where they differ from those listed here, are placed in parentheses following a dash after the appropriate taxa. Authors and dates for higher taxa (which Iredale did not include) are added, as well as those for genera, subgenera and type species. Superscript numbers refer to the numbered comments under "Notes" at the end of the systematic list. (The familial level and generic classification of land snails has not yet been completely stabilized, and there will be, no doubt, some future changes, especially as they relate to Australian taxa. Many of the "Notes" at the end of this paper were included in order to give some of the especially pertinent past and current taxonomic opinions.) An asterisk before a name indicates that the taxon was introduced into Australia (and was not included in Iredale's "Basic list" or in his succeeding publications[1]). Two asterisks before a name indicate that the taxon was named subsequent to Iredale's publications. In brackets, after each genus or subgenus, is the number of species reported for Australia by Iredale in his final classification. Subsequently named species and subspecies are listed in the "Notes" section.

Revision of Iredale's classification further may require a considerable amount of basic research, which will eventually be done. But, to assist workers in the meantime, this outline of classification is presented.

OUTLINE OF CLASSIFICATION

Class GASTROPODA Cuvier 1797

Subclass PROSOBRANCHIA Milne Edwards 1848 [Streptoneura Spengel 1881]

Order ARCHAEOGASTROPODA Thiele 1927 [Diotocardia Mörch 1865] – (Pectinibranchia Blainville 1814)

Suborder Rhipidoglossa Mörch 1865

Superfamily Neritoidea Rafinesque 1815 [Neritacea]

Family HELICINIDAE Férussac 1822
Subfamily Helicininae
Genus *Ceratopoma* Möllendorff 1893 (*Helicina caroli* Kobelt 1884) [4]

Genus *Pleuropoma* Möllendorff 1893 (*Helicina dichroa* Möllendorff 1890) [4][2]

Family HYDROCENIDAE Troschel 1856 – (Georissidae Blanford 1864)
Genus *Omphalorissa* Iredale 1933[3] (*Georissa multilirata* Brazier 1875) [4]

Order MESOGASTROPODA Thiele 1927 [Taenioglossa Troschel 1848; Monotocardia Mörch 1865] – (Pectinibranchia)

Suborder Architaenioglossa Haller 1894

Superfamily Ampullarioidea Guilding 1828 [Ampullariacea; Cyclophoroidea or Cyclophoracea]

Family CYCLOPHORIDAE Gray 1847[4]
Subfamily Cyclophorinae
Genus *Ditropisena* Iredale 1933[5] (*Cyclophorus (Ditropis) macleayi* Brazier 1877) [2]
Genus *Leptopoma* Pfeiffer 1847 (*Cyclostoma vitreum* Lesson 1830) [1]

Family PUPINIDAE Adams 1855[4,6]
Subfamily Pupininae
Genus *Ambipupina* Iredale 1937a (*Pupina pettardi* Crosse 1874) [1]
Genus *Diplopupina* Iredale 1937a (*Pupina coxeni* Brazier 1875) [1]
Genus *Dolopupina* Iredale 1937a (*Pupina wilcoxi* Cox 1864) [1 + 1 subsp.]
Genus *Estopupina* Iredale 1937a (*Pupina costata* Hedley & Musson 1892) [1]
Genus *Hedleya* Cox 1892 (*Hedleya macleayi* Cox 1892) [3]
Genus *Hildapina* Iredale 1940a (*Pupina subpolita* Fulton 1906) [1]
Genus *Lopupina* Iredale 1937a (*Pupina bidentata* Beddome 1897) [2]
Genus *Necopupina* Iredale 1937a (*Pupinella densecostata* Fulton 1906) [3]
Genus *Signepupina* Iredale 1937a (*Pupinella macgillivrayi* Cox 1864)
Subgenus *Signepupina* s.s. [10]
Subgenus *Parpupina* Iredale 1937a (*Pupina crossei* Brazier 1876) [1]
Genus *Suavocallia* Iredale 1933 (*Callia splendens* Dohrn 1862) [1]

Family DIPLOMMATINIDAE Pfeiffer 1856[4,7] [Cochlostomatidae Kobelt 1902][8]
Genus *Eclogarinia* Iredale 1933[9] (*Diplommatina gowllandi* Brazier 1875) [1]
Genus *Velepalaina* Iredale 1937a (*Diplommatina oreadis* Hedley 1900) [2]

Subclass PULMONATA Cuvier 1817 [Euthyneura Spengel 1881, in part]

Order SOLEOLIFERA Simroth 1890 [Gymnophila Férussac 1812; Systellommatophora Pilsbry 1948]

Superfamily Veronicelloidea [Veronicellacea]

Family VERONICELLIDAE Gray 1840 – (Vaginulidae Gill 1871)[10]
Genus *Meisenheimeria* Grimpe & Hoffmann 1924[11] (*Vaginula frauenfeldi* Semper 1885) [1]
Genus *Sarasinula* Grimpe & Hoffmann 1924[12] (*Vaginulus plebeius* Fischer 1868) [1]

Family RATHOUISIIDAE Heude 1885
Genus *Prisma* Simroth 1891 (*Veronicella prismatica* Tapparone-Canefri 1883) [2]

Order STYLOMMATOPHORA Schmidt 1856 [Geophila Férussac 1812]

Suborder Heterurethra Pilsbry 1900

Superfamily Succineoidea [Succineacea]

Family SUCCINEIDAE Beck 1837
Subfamily Succineinae
Genus *Arborcinea* Iredale 1937a[13] (*Succinea eucalypti* Cox 1864) [3]
Genus *Austrosuccinea* Iredale 1937a[14] (*Succinea australis* Férussac 1821)
Subgenus *Austrosuccinea* s.s. [11 + 1 subsp.]
Subgenus *Cerinasota* Iredale 1939[13] (*Succinea coxi* Finlay 1927) [1]

Superfamily Athoracophoroidea [Athoracophoracea]

Family ATHORACOPHORIDAE Gray 1853 – (Aneitidae Gray 1860)
Genus *Triboniophorus* Humbert 1863 (*Triboniophorus graeffei* Humbert 1863) [1]

Suborder Orthurethra Pilsbry 1900

Superfamily Achatinelloidea [Achatinellacea]

Family ACHATINELLIDAE Gulick 1873 [Helicteridae Pease 1869][15]
Subfamily Tornatellininae Pilsbry 1910[16] – (Elasmatinidae Iredale 1937a)
Genus *Elasmias* Pilsbry 1910 (*Tornatellina aperta* Pease 1864) [2]
Subfamily Pitysinae Cooke & Kondo 1960 – (Elasmatinidae)
Genus *Tornatellinops* Pilsbry & Cooke 1915 (*Tornatellina novoseelandica* Pfeiffer 1852) [3][17]

*Superfamily Cionelloidea [Cionellacea]

*Family CIONELLIDAE Clessin 1879
*Genus *Cionella* Jeffreys 1829 (*Helix lubricus* Müller 1774) [1]

Superfamily Pupilloidea[18] [Pupillacea]

Family VERTIGINIDAE Pilsbry 1916
Subfamily Nesopupinae Steenberg 1925
Genus *Cylindrovertilla* Boettger 1880 (*Pupa fabreana* Crosse 1872) [2] – (Cylindrovertillidae Iredale 1940a)
Genus *Wallivertilla* Iredale 1937a (*Pupa kingi* Cox 1864) [1 + 1 subsp.][19] – (Cylindrovertillidae)
Genus *Gyliotrachela* Tomlin 1930 (*Hypselostoma hungerfordiana* Möllendorff 1891) [1] – (Gastrocoptidae Pilsbry 1918)
Genus *Somniopupa* Iredale 1937a (*Pupa* (*Vertigo*) *scotti* Brazier 1875) [1] – (Pupillidae)

Family CHONDRINIDAE Steenberg 1925 [Gastrocoptidae or Gastrocoptinae Pilsbry 1918]
Subfamily Gastrocoptinae Pilsbry 1918
Genus *Australbinula* Pilsbry 1916 (*Pupa* (*Vertigo*) *rossiteri* Brazier 1875)[20] – (Gastrocoptidae)
Subgenus *Australbinula* s.s. [14 + 1 subsp.]
Subgenus *Westralcopta* Iredale 1939 (*Pupa mooreana* Smith 1894) [1]
Genus *Gyrodaria* Iredale 1940a (*Australbinula strangeana* Iredale 1937a) [1 + 1 subsp.] – (Gastrocoptidae)

Family PUPILLIDAE Turton 1831
Subfamily Pupillinae
Genus *Glyptopupoides* Pilsbry 1926 (*Pupoides hedleyi* Pilsbry 1926 = *Diplommatina egregia* Hedley & Musson 1891) [1][21,22] – (Pupoididae Iredale 1939)

Genus *Omegapilla* Iredale 1937a[23] (*Pupa nelsoni* Cox 1864) [5]
Genus *Themapupa* Iredale 1930[21,24] (*Pupa beltiana* Tate 1894) [13 + 3 subsp.] – (Pupoididae)

Family VALLONIIDAE
*Subfamily Valloniinae Morse 1864
*Genus *Vallonia* Risso 1826 (*Vallonia rosalia* Risso 1826 = *Helix pulchella* Müller 1774) [2]
Subfamily Acanthinulinae Steenberg 1917
Genus *Imputegla* Iredale 1937a[25] (*Pupisoma circumlitum* Hedley 1897) – (Pupisomidae Iredale 1940a) [2]
Family BULIMINIDAE Clessin 1879 [Enidae Woodward 1903][15]
Genus *Amimopina* Iredale 1933[13,26] (*Bulimus beddomei* Brazier 1880) [1] – (Papuinidae Iredale 1938)

Suborder Mesurethra Baker 1955

Superfamily Clausilioidea Mörch 1864 [Clausiliacea]

Family MEGASPIRIDAE Pilsbry 1904
Genus *Coelocion* Pilsbry 1904 [1] – (Coelociontidae Iredale 1937a)[27]

Suborder Sigmurethra Pilsbry 1900

Infraorder Holopodopes Baker 1962

Superfamily Achatinoidea [Achatinacea]

Family ACHATINIDAE Swainson 1840
*Subfamily Ferussaciidae Bourguignat 1883 (emend.)[28] [Cecilloidinae Mörch 1864]
*Genus *Cecilioides* Férussac 1814 (*Bulimus acicula* Bruguiere = *Buccinum aciculum* Müller 1774) [1]
*Genus *Ferussacia* Risso 1826 (emend.) (*Ferrussacia gronoviana* Risso 1826) [1]
Subfamily Stenogyrinae Crosse & Fischer 1877[28] [Subulininae Crosse & Fischer 1877]
Genus *Eremopeas* Pilsbry 1906 (*Stenogyra interioris* Tate 1894) [3][29]
Genus *Opeas* Albers 1850 (*Helix goodalli* Miller 1822 = *Bulimus pumilus* Pfeiffer 1840) [1]
*Genus *Subulina* Beck 1837 (*Bulimus octonus* Bruguière 1792) [1]

Superfamily Rhytidoidea [Rhytidacea] – (Paryphantoidea)

Family RHYTIDIDAE Pilsbry 1893[30] – (Paryphantidae Godwin-Austen 1893)
Genus *Echotrida* Iredale 1933[13,31] (*Helix strangeoides* Cox 1864) [1]
Genus *Melavitrina* Iredale 1933[13,32] (*Vitrina milligani* Pfeiffer 1854) [2]
Genus *Montidelos* Iredale 1943[13,33] (*Montidelos oreadis* Iredale 1943) [1]
Genus *Murphitella* Iredale 1933[13,34] (*Helix franklandiensis* Forbes 1851) [3]
Genus *Namoitena* Iredale 1933[13] (*Helix namoiensis* Cox 1868) [1]
Genus *Occirhenea* Iredale 1933[13] (*Helix georgiana* Quoy & Gaimard 1832) [1] – (Occirheneidae Iredale 1939)
Genus *Prolesophanta* Iredale 1933[13,35] (*Helix dyeri* Petterd 1879) [1]
Genus *Saladelos* Iredale 1933[13,36] (*Helix splendidula* Pfeiffer 1846 = *Saladelos commixta* Iredale 1933) [8]
Genus *Strangesta* Iredale 1933[13,34] (*Helix leichardti* Cox 1864) [18][37]
Genus *Tasmadelos* Iredale 1938[13,35] (*Helix* (*Hyalina*) *nelsonensis* Brazier 1871) [1 + 1 subsp.]
Genus *Tasmaphena* Iredale 1933[13,34] (*Helix sinclairi* Pfeiffer 1845) [1]
Genus *Torresiropa* Iredale 1933[13,38] (*Helix* (*Patula*) *spaldingi* Brazier 1876) [2]
Genus *Victaphanta* Iredale 1933[13,39] (*Nanina atramentaria* Shuttleworth 1853) [2]

Family ACAVIDAE Pilsbry 1895[40]

Subfamily Caryodinae Thiele 1926

Genus *Anoglypta* Martens 1861 (*Helix launcestonensis* Reeve 1853) [1] – (Anoglyptidae Iredale 1937c)

Genus *Brazieresta* Iredale 1933[13,41] (*Bulimus larreyi* Brazier 1871) [1] – (Hedleyelloidea, Hedleyellidae Iredale 1937c)

Genus *Caryodes* Albers 1850 (*Bulimus dufresnii* Leach 1815) [1 + 3 subsp.] – (Caryodidae Thiele 1926)

Genus *Hedleyella* Iredale 1914[41] (*Helicophanta falconeri* Gray 1834) [2 + 1 subsp.] – (Hedleyelloidea, Hedleyellidae)

Genus *Pandofella* Iredale 1933[13,41] (*Panda whitei* Hedley 1912) [1]- (Hedleyelloidea, Hedleyellidae)

Genus *Pedinogyra* Albers 1860 (*Helix cunninghami* Gray 1834 = *Helix hayii* Griffith & Pidgeon 1833) [5 + 2 subsp.] – (Pedinogyroidea, Pedinogyridae Iredale 1937c)

Genus *Pygmipanda* Iredale 1933[13,41] (*Bulimus atomatus* Gray 1834) [2 + 1 subsp.] – (Hedleyelloidea, Hedleyellidae)

Superfamily Orthalicoidea [Orthalicacea; Bulimuloidea or Bulimulacea]

Family ORTHALICIDAE Albers-Martens 1860 [Bulimulidae Tryon 1867] – (Bothriembryontidae Iredale, 1937a)

Genus *Bothriembryon* Pilsbry 1894 (*Helix melo* Quoy & Gaimard 1832)[42] – (Bothriembryontidae)

Subgenus *Bothriembryon* s.s. [11 + 4 subsp.]

Subgenus *Celatembryon* Iredale 1939[13] (*Bothriembryon* (*Celatembryon*) *distinctus* Iredale 1939) [1][43]

Subgenus *Dialembryon* Iredale 1939[13] (*Bulimus indutus* Menke 1842) [4]

Subgenus *Hartogembryon* Iredale 1933[13] (*Bulimus onslowi* Cox 1864) [4]

Subgenus *Larapintembryon* Iredale 1933[13] (*Liparus spenceri* Tate 1894) [3][44]

Subgenus *Ponembryon* Iredale 1939[13] (*Bulimus dux* Pfeiffer 1861) [2 + 1 subsp.]

Subgenus *Satagembryon* Iredale 1933[13] (*Buliminus gratwicki* Cox 1899) [2]

Subgenus *Telembryon* Iredale 1939[13] (*Bulimus kingii* Gray 1825) [10 + 1 subsp.]

Genus *Tasmanembryon* Iredale 1933[13] (*Bulimus tasmanicus* Pfeiffer 1853) [1] – (Bothriembryontidae)

Infraorder Aulcaopoda Pilsbry 1896

Superfamily Arionoidea [Arionacea; Endodontoidea or Endodontacea]

Family PUNCTIDAE[45,46] [Endodontidae Pilsbry 1895]

Subfamily Endodontinae Pilsbry 1895[47] [= Patulinae Tryon 1866] – (Charopidae Hutton 1884)[48]

Genus *Allocharopa* Iredale 1937a[13] (*Helix brazieri* Cox 1868) [6]

Genus *Bischoffena* Iredale 1937a[13] (*Helix bischoffensis* Petterd 1879) [1]

Genus *Cralopa* Iredale 1941a[13] (*Helix stroudensis* Cox 1864) [2]

Genus *Dentherona* Iredale 1933[13,49] (*Helix dispar* Brazier 1871) [1]

Genus *Discocharopa* Iredale 1913[50] (*Charopa* (*Discocharopa*) *exquisita* Iredale 1913) [6][51]

Genus *Dupucharopa* Iredale 1937a[13] (*Helix millestriata* Smith 1874) [1]

Genus *Egilodonta* Iredale 1937a[13,49] (*Charopa bairnsdalensis* Gabriel 1930) [1]

Genus *Egilomen* Iredale 1937a[13] (*Helix cochlidium* Cox 1868) [7]

Genus *Elsothera* Iredale 1933[13] (*Helix sericatula* Pfeiffer 1850) [10]

Genus *Epinicium* Iredale 1939[13] (*Epinicium restifer* Iredale 1939) [1 + 1 subsp.]

Genus *Geminoropa* Iredale 1933[13,52] (*Helix antialba* Beddome in Petterd 1879) [2]

Genus *Gyrocochlea* Hedley 1924[53] (*Helix vinitincta* Cox 1868) [14]

Genus *Kannaropa* Iredale 1937a[13] (*Helix subrugosa* Legrand 1871) [1]

Genus *Letomola* Iredale 1941a[13] (*Rhophodon contortus* Hedley 1924) [1]

Genus *Luinodiscus* Iredale 1937a[13,54] (*Helix cuprea* Cox 1868)

Subgenus *Luinodiscus* s.s. [5]

Subgenus *Corinomala* Iredale 1939[13] (*Endodonta* (*Charopa*) *tumida* Odhner 1917) [1]

Genus *Mussonula* Iredale 1937c[13,55] (*Mussonula verax* Iredale 1937c) [1]
Genus *Oreomava* Iredale 1933[13] (*Helix otwayensis* Petterd 1879) [3]
Genus *Pernagera* Iredale 1933[13] (*Helix albanensis* Cox 1868) [10]
Genus *Pillomena* Iredale 1933[13] (*Flammulina meraca* Cox & Hedley) [5]
Genus *Rhophodon* Hedley 1924[56] (*Rhophodon peregrinus* Hedley 1924) [2]
Genus *Roblinella* Iredale 1937a[53] (*Helix roblini* Petterd 1879) [8]
Genus *Setomedea* Iredale 1933[13] (*Suteria seticostata* Hedley 1924) [2]
Genus *Theskelomensor* Iredale 1933[13,57] (*Helix lizardensis* Pfeiffer 1863) [1]
Subfamily Punctinae Morse 1864 – (Paralaomidae Iredale 1941a)
Genus *Excellaoma* Iredale 1937a[13] (*Helix retipora* Cox 1867) [5][58]
Genus *Gratilaoma* Iredale 1939[13] (*Gratilaoma cara* Iredale 1939) [1]
Genus *Insullaoma* Iredale 1937b[13] (*Paralaoma* (*Insullaoma*) *riddlei* Iredale 1937b) [2]
Genus *Iotula* Iredale 1941a[13] (*Helix microcosmos* Cox 1868) [2]
Genus *Laomavix* Iredale 1937[13] (*Helix minima* Cox 1868) [2]
Genus *Magilaoma* Iredale 1937a[13] (*Magilaoma parpictilis* Iredale 1937a) [2]
Genus *Miselaoma* Iredale 1933[13] (*Helix weldii* Tenison-Woods 1877) [2][51]
Genus *Paralaoma* Iredale 1933 (*Paralaoma raoulensis* Iredale 1913) [13]
Genus *Pasmaditta* Iredale 1933[13] (*Helix jungermanniae* Petterd 1879) [1]
Genus *Pedicamista* Iredale 1933[13] (*Helix coesus* Cox in Legrand 1871) [1]
Genus *Planilaoma* Iredale 1937a[13] (*Helix luckmanii* Brazier 1877) [1]
Genus *Trocholaoma* Iredale 1937a[13] (*Helix spiceri* Petterd 1879) [4]
Genus *Turbolaoma* Iredale 1937a[13] (*Laoma turbinuloidea* Gabriel 1930) [1]
Genus *Westralaoma* Iredale 1939[13] (*Westralaoma experta* Iredale 1939) [4]
Subfamily Helicodiscinae Pilsbry 1927[59] – (Stenopylidae Thiele 1931)
Genus *Stenopylis* Fulton 1914 (*Planispira hemiclausa* Tate 1894)[60] [1]
Subfamily Phenacohelicinae Suter 1892 [Flammulinidae Crosse 1894; Amphidoxinae Thiele 1931] (Flammulinidae)
Genus *Delinitesta* Iredale 1933[13] (*Helix gayndahensis* Brazier 1875) [1]
Genus *Flammulops* Iredale 1937a[13] (*Flammulina excelsior* Hedley 1896) [1]
Genus *Hedleyoconcha* Pilsbry 1893 (*Helix delta* Pfeiffer 1857) [2] – (Hedleyoconchidae Iredale 1941a, 1942)[61]
Genus *Mulathena* Iredale 1933[13] (*Helix fordei* Brazier 1871) [4]
Genus *Oreokera* Iredale 1933[13] (*Flammulina cumulus* Odhner 1917) [3]
Genus *Queridomus* Iredale 1937a[13] (*Helix grenvillei* Brazier 1876) [1]
Genus *Stenacapha* Iredale 1933[13] (*Helix savesi* Petterd 1879) [5]
Genus *Thryasona* Iredale 1933[13] (*Helix diemenensis* Cox 1868) [5]

*Family ARIONIDAE Gray in Turton 1840
*Subfamily Arioninae
*Genus *Arion* Férussac 1819 (*Arion empiricorum* Férussac 1819 = *Limax ater* Linnaeus 1758) [3]

*Superfamily Limacoidea [Limacacea; Zonitoidea or Zonitacea]

*Family VITRINIDAE Fitzinger 1833 [Zonitidae Mörch 1864]
*Subfamily Zonitinae Mörch 1864
*Genus *Oxychilus* Fitzinger 1833 (*Helix cellarius* Müller 1774) [3][62]
*Subfamily Vitreinae Baker 1930
*Genus *Vitrea* Fitzinger 1833 (*Vitrea diaphana* Fitzinger = *Helix cristallina* Müller 1774) [1]
*Subfamily Gastrodontinae Tryon 1866
*Genus *Zonitoides* Lehmann 1862 (*Helix nitidus* Müller 1774) [1]

*Family LIMACIDAE Rafinesque 1815
*Subfamily Limacinae
*Genus *Deroceras* Rafinesque 1820 (*Limax gracilis* Rafinesque 1820 = *Limax laeve* Müller 1774) [2][63]
*Genus *Lehmannia* Heynemann 1861 (*Limax marginatus* Müller 1774)[63]

*Sugbenus *Lehmannia* s.s. [1]
*Subgenus *Limacus* Lehmann 1864 (*Limax* (*Limacus*) *breckworthianus* Lehmann = *Limax flavus* Linnaeus 1758) [1]
*Genus *Limax* Linnaeus 1758 (*Limax maximus* Linnaeus 1758) [1][63]
*Subfamily Milacinae Cockerell 1935[64]
*Genus *Milax* Gray 1855 (*Limax gagates* Draparnaud 1801) [1][63]

Family ARIOPHANTIDAE Godwin-Austen 1888[65]
Subfamily Cystopeltinae Cockerell 1891[66] – (Cystopeltidae)
Genus *Cystopelta* Tate 1881[66] (*Cystopelta petterdi* Tate 1881) [4]

Family EUCONULIDAE[67,68]
*Subfamily Euconulinae Clessin 1879
*Genus *Euconulus* Rienhardt 1883 (*Helix fulva* Müller 1774) [1]
Subfamily Microcystinae Thiele 1931[68]
Genus *Alienitor* Iredale 1937c[13,69] (*Helix lyndhurstensis* Cox 1868) [1][70] – (Microcystidae Thiele 1931)
Genus *Dendronitor* Iredale 1933[13] (*Microcystis inscensa* Hedley 1912) [1]
Genus *Echonitor* Iredale 1937b[13] (*Thalassia cyrtochila* Gude 1905) [4] – (Microcystidae)
Genus *Eclipsena* Iredale 1937c[13] (*Helix* (*Conulus*) *elleryi* Brazier 1875) [1] – (Durgellinidae Iredale 1941c)[71]
Genus *Expocystis* Iredale 1937c[13] (*Helix rustica* Pfeiffer 1852) [2] – (Microcystidae)
Genus *Melocystis* Iredale 1937c[13] (*Helix circumcincta* Cox 1868) [1] – (Nitoridae Iredale 1937c)
Genus *Nevelasta* Iredale 1937c[13] (*Helix pampini* Cox 1868) [2] – (Durgellinidae)[71]
Genus *Periclocystis* Iredale 1937b[13] (*Periclocystis ardeni* Iredale 1937b) [1] – (Microcystidae)
Genus *Sodaleta* Iredale 1937c[13] (*Helix russelli* Brazier 1875) [7] – (Durgellinidae)[71]
Genus *Tarocystis* Iredale 1937c[13] (*Microcystis responsivus* Hedley 1912) [3] – (Microcystidae)
Genus *Turrisitala* Iredale 1933[13] (*Helix turriculata* Cox 1868 = *Turrisitala normalis* Iredale 1933) [3] – (Durgellinidae)[71]
Genus *Westracystis* Iredale 1933[13] (*Lamprocystis lissa* Smith 1894) [2] – (Microcystidae)

Family HELICARIONIDAE Bourguignat 1883 (emend.)[72]
Subfamily Helicarioninae[73]
Genus *Desidarion* Iredale 1941b[13] (*Desidarion dispositus* Iredale 1941b) [1]
Genus *Fastosarion* Iredale 1933[74] (*Vitrina superba* Cox 1871) [1]
Genus *Helicarion* Férussac 1822 (emend.)[75] (*Helicarion cuvieri* Férussac 1821) [4]
Genus *Luinarion* Iredale 1933[74,75] (*Helicarion thomsoni* Ancey 1889 = *Vitrina castanea* Pfeiffer 1853) [1]
Genus *Mysticarion* Iredale 1941b[13] (*Mysticarion leucospira insuetus* Iredale 1941b) [1 + 1 subsp.]
Genus *Parmavitrina* Iredale 1937c[13] (*Vitrina planilabris* Cox 1866) [2]
Genus *Peloparion* Iredale 1937c[13] (*Helicarion helenae* Godwin-Austen 1883) [1]
Genus *Parmacochlea* Smith 1884 (*Parmacochlea fischeri* Smith 1884) [3]
Genus *Vercularion* Iredale 1933[74,75] (*Helicarion bullaceus* Odhner 1917 = *Helicarion brazieri* Cox 1873) [5 + 1 subsp.]
Subfamily Sesarinae Thiele 1931[76]
Genus *Malandena* Iredale 1933[76] (*Macrochlamys suturalis* Odhner 1917) [1] – (Macrochlamydidae Godwin-Austen 1888)
Genus *Nitor* Gude 1911 (*Helix subrugata* Reeve 1852) – (Nitoridae)
Subgenus *Nitor* s.s. [2 + 1 subsp.]
Subgenus *Pravinitor* Iredale 1937c[77] (*Nitor kreffti insularum* Iredale 1937c) [1 + 1 subsp.]
Subgenus *Modonitor* Iredale 1937c[13] (*Helix pudibunda* Cox 1868) [1]

*Superfamily Testacelloidea [Testacellacea]

*Family TESTACELLIDAE Gray 1840
*Genus *Testacella* Draparnaud 1801 (*Testacella haliotidea* Draparnaud 1801) [1]

Infraorder Holopoda Pilsbry 1896

Superfamily Helicoidea [Helicacea]

Family CAMAENIDAE Pilsbry 1895[78] [Lucernidae Swainson 1840][15]
Subfamily Camaeninae Pilsbry 1895
Genus *Amplirhagada* Iredale 1933[13] (*Helix* (*Hadra*) *sykesi* Smith 1894) [9] – (Rhagadidae Iredale 1938)
Genus *Annakelea* Iredale 1933[79] (*Helix richmondiana* Reeve 1852) [5] – (Hadridae Iredale 1937b)
Genus *Annoselix* Iredale 1939[13] [1] – (Dipnelicidae Iredale 1937b)[80]
Genus *Arnemelassa* Iredale 1933[13] (*Helix creedi* Cox 1868) [1] – (Xanthomelontidae Iredale 1937b)
Genus *Austrochloritis* Pilsbry 1891[81] (*Helix porteri* Cox 1866) – (Chloritidae Iredale 1938)
Subgenus *Austrochloritis* s.s. [15]
Subgenus *Patrubella* Iredale 1938[81] (*Helix* (*Planispira*) *buxtoni* Brazier 1880) [1]
Genus *Baccalena* Iredale 1937b[13] (*Hadra squamulosa* Tate 1894) [1] – (Xanthomelontidae)
Genus *Basedowena* Iredale 1937b[13] (*Basedowena cottoni* Iredale 1937b) [1] – (Xanthomelontidae)
Genus *Baudinella* Thiele 1931[82] (*Helix* (*Gonostoma*) *baundinensis* Smith 1893) [1] – (Xanthomelontidae)
Genus *Bellrhagada* Iredale 1938[13] (*Rhagada plicata* Preston 1914) [1] – (Rhagadidae)
Genus *Bentosites* Iredale 1933[13] (*Helix macleayi* Cox 1865) [7 + 1 subsp.] – (Hadridae)
Genus *Calvigenia* Iredale 1938[13] (*Helix blackmani* Cox 1868) [3] – (Chloritidae)
Genus *Chloritisanax* Iredale 1933[13] (*Helix banneri* Pfeiffer 1863) [1] – (Chloritidae)
Genus *Chloritobadistes* Iredale 1933[13] (*Helix victoriae* Cox 1868) [1] – (Hadridae)
Genus *Contramelon* Iredale 1937b[13] (*Helix* (*?Plectopropis*) *howardi* Angas 1869) [1] – (Hadridae)
**Genus *Craterodiscus* McMichael 1959[83] (*Craterodiscus pricei* McMichael 1959) [1]
Genus *Cristigibba* Tapparone-Canefri 1883[84] (*Helix tortilabia* Lesson 1831) – (Planispiridae Iredale 1941c)
Subgenus *Australgibba* Iredale 1933[84] (*Helix wesselensis* Cox 1868) [1]
Genus *Cupedora* Iredale 1933[13] (*Helix lincolniensis* Pfeiffer 1864 = *Helix* (*Hadra*) *patruelis* Angas 1864) [3] – (Hadridae)
Genus *Damochlora* Iredale 1938[13] (*Helix* (*Chloritis*) *millepunctata* Smith 1894) (Chloritidae)
Subgenus *Damochlora* s.s. [2]
Subgenus *Perochlora* Iredale 1939[13] (*Helix* (*Chloritis*) *rectilabrum* Smith 1894) [1]
Genus *Dipnelix* Iredale 1937b[13] [1 + 1 subsp.][85] – (Dipnelicidae)[80]
Genus *Dirutrachia* Iredale 1937b[13] (*Hadra sublevata* Tate 1894) [2] (Hadridae)
Genus *Discomelon* Iredale 1938[13] (*Discomelon intricatum* Iredale 1938) [1] – (Hadridae)
Genus *Divellomelon* Iredale 1933[13] (*Thersites hillieri* Smith 1910) [1] – (Xanthomelontidae)
Genus *Exilibadistes* Iredale 1933[13] (*Helix bednalli* Brazier 1872) = *Helix sutilosa* Férussac 1829) [1] – (Hadridae)
Genus *Exiligada* Iredale 1939[13] (*Exiligada negriensis* Iredale 1939) [2] – (Rhagadidae)
Genus *Fatulabia* Iredale 1937b[13] (*Helix* (*Hadra*) *elderi* Bednall 1892) [4] – (Xanthomelontidae)
Genus *Findomelon* Iredale 1937b[13] (*Helix luteofusca* Cox 1868) [1] – (Hadridae)
Genus *Galadistes* Iredale 1938[13] (*Helix liverpoolensis* Brazier 1872) [5] – (Hadridae)
Genus *Globorhagada* Iredale 1933[13] (*Helix* (*Hadra*) *prudhoensis* Smith 1894) [4] – (Rhagadidae)
Genus *Gloreugenia* Iredale 1933[13] (*Helix coxeni* Cox 1871) [7] – (Chloritidae)
Genus *Glyptorhagada* Pilsbry 1890[79] (*Helix* (*Rhagada*) *silveri* Angas 1868) – (Xanthomelontidae)
Subgenus *Glyptorhagada* s.s. [7][86]
Subgenus *Eximiorhagada* Iredale 1933 (*Xanthomelon asperrimum* Hedley 1905) [1]
Genus *Gnarosophia* Iredale 1933[13] (*Helix bellendenkerensis* Brazier 1875) [10 + 1 subsp.] – (Hadridae)
Genus *Granulomelon* Iredale 1933[13] (*Hadra grandituberculata* Tate 1894) [1] – (Xanthomelontidae)

Genus *Hadra* Albers 1861[79] (*Helix bipartita* Férussac 1822) [5 + 2 subsp.] – (Hadridae)

Genus *Jacksonena* Iredale 1937c[13] (*Planispira rudis* Hedley 1912) [2] – (Hadridae)

Genus *Kimboraga* Iredale 1933[13] (*Chloritis micromphala* Gude 1907) [1] – (Chloritidae)

Genus *Lacustrelix* Iredale 1937b[13] (*Helix eyrei* Adams & Angas 1876) [1] – (Hadridae)

Genus *Meliobba* Iredale 1940b[13] (*Meliobba shafferyi* Iredale 1940b) [1]

Genus *Meracomelon* Iredale 1933[13] (*Helix rufofasciata* Brazier 1875) [11] – (Hadridae)

Genus *Meridolum* Iredale 1933[13] (*Helix jervisensis* Quoy & Gaimard 1832) [12][87] – (Hadridae)

Genus *Micardista* Iredale 1933[13] (*Helix* (*Camaena*) *barneyi* Cox 1873) [1] – (Hadridae)

Genus *Mussonena* Iredale 1938[13] (*Helix spinei* Cox 1868) [2] – (Chloritidae)

Genus *Nannochloritis* Iredale 1938[81] (*Chloritis layardi* Gude 1906) [1] – (Chloritidae)

Genus *Neveritis* Iredale 1938[13] (*Chloritis poorei* Gude 1907) [5] – (Chloritidae)

Genus *Obsteugenia* Iredale 1933[13] (*Chloritis inflecta* Hedley 1912) [1] – (Chloritidae)

Genus *Offachloritis* Iredale 1933[13] (*Helix dryanderensis* Cox 1872) [1] – (Chloritidae)

Genus *Pallidelix* Iredale 1933[13] (*Helix greenhilli* Cox 1866) [3] – (Hadridae)

Genus *Papuexul* Iredale 1933[88] (*Helix bidwilli* Pfeiffer 1853) [1] – (Papuinidae)

Genus *Parglogenia* Iredale 1938[13] (*Helix pelodes* Pfeiffer 1846) [3] – (Chloritidae)

Genus *Parrhagada* Iredale 1938[13] (*Thersites* (*Rhagada*) *woodwardi* Fulton 1902) [6] – (Rhagadidae)

Genus *Plectorhagada* Iredale 1933[13] (*Helix plectilis* Benson 1853) – (Rhagadidae)

Subgenus *Plectorhagada* s.s. [1]

Subgenus *Idamera* Iredale 1939[13] (*Plectorhagada* (*Idamera*) *rovina* Iredale 1939) [1]

Genus *Pleuroxia* Ancey 1887[82] (*Helix crytopleura* Pfeiffer 1862) – (Xanthomelontidae)

Subgenus *Pleuroxia* s.s. [9][89,90]

Subgenus *Angasietta* Iredale 1939[13] (*Hadra oligopleura* Tate 1894) [4 + 2 subsp.]

Subgenus *Gantomia* Iredale 1939[13] (*Pleuroxia* (*Gantomia*) *abstans* Iredale 1939) [1]

Genus *Posorites* Iredale 1933[13] (*Helix fucata* Pfeiffer 1853) [6] – (Papuinidae Iredale 1938)

Genus *Quistrachia* Iredale 1939[13] (*Trachia monogramma* Ancey 1898) [1] – (Chloritidae)

Genus *Rachispeculum* Iredale 1933[13,91] (*Bulimus bidwilli* Cox 1868) [1] – (Papuinidae)

Genus *Ramogenia* Iredale 1938[13] (*Cloritis obnubila* Gude 1907) [4] – (Chloritidae)

Genus *Rhagada* Albers 1861[79] (*Helix reinga* "Gray" Pfeiffer 1846) – (Rhagadidae)

Subgenus *Rhagada* s.s. [11]

Subgenus *Tumegada* Iredale 1939[13] (*Helix convicta* Cox 1870) [2 + 4 subsp.]

Subgenus *Thetagada* Iredale 1939[13] (*Rhagada* (*Thetagada*) *astuta* Iredale 1939) [1]

Genus *Rhynchotrochus* Möllendorff 1895[88] (*Helix tayloriana* Adams & Reeve 1850) [2 + 1 subsp.] – (Papuinidae)

Genus *Semotrachia* Iredale 1933[13,92] (*Thersites basedowi* Hedley 1905) [8] – (Hadridae)

Genus *Setobaudinia* Iredale 1933[13] (*Helix* (*Gonostoma*) *collingii* Smith 1893) [1] – (Xanthomelontidae)

Genus *Sinumelon* Iredale 1930[79] (*Helix nullarborica* Tate 1879) [25 + 1 subsp.][93] – (Xanthomelontidae)

Genus *Sphaerospira* Mörch 1867[79] (*Helix fraseri* Griffith & Pidgeon 1833) [4 + 4 subsp.] – (Hadridae)

Genus *Spurlingia* Iredale 1933[13] (*Helix nicomede* Brazier 1878) [9] – (Hadridae)

Genus *Temporena* Iredale 1933[13] (*Helix whartoni* Cox 1871) [2] – (Hadridae)

Genus *Tenuigada* Iredale 1939[13] (*Tenuigada percita* Iredale 1939) [2] – (Rhagadidae)

Genus *Tolgachloritis* Iredale 1933[13] (*Chloritis jacksoni* Hedley 1912) [1] – (Chloritidae)

Genus *Torresitrachia* Iredale 1933[13] (*Helix* (*Trachia*) *endeavourensis* Brazier 1872) – (Xanthomelontidae)

Subgenus *Torresitrachia* s.s. [5]

Subgenus *Melostrachia* Iredale 1938[13] (*Torresitrachia glomerans* Iredale 1938) [1]

Genus *Trachiopsis* Pilsbry 1893[84] (*Helix tuckeri* Pfeiffer 1846) [4] – (Planispiridae)

Genus *Trozena* Iredale 1938[13] (*Trozena morata* Iredale 1938) [1] – (Xanthomelontidae)

Genus *Varohadra* Iredale 1933[13,94] (*Helix oconnellensis* Cox 1871) [39 + 4 subsp.] – (Hadridae)

Genus *Ventopelita* Iredale 1933[13] (*Helix leucocheilus* Cox 1868 = *Helix mariae* Cox 1864) [7] – (Hadridae)

Genus *Vidumelon* Iredale 1933[13] (*Hadra wattii* Tate 1894) [1] – (Hadridae)

Genus *Westraltrachia* Iredale 1933[13] (*Trachia froggatti* Ancey 1898) – (Rhagadidae)
Subgenus *Westraltrachia* s.s. [1]
Subgenus *Zygotrachia* Iredale 1939[13] (*Westraltrachia alterna* Iredale 1939) [4]
Genus *Xanthomelon* Martens 1861 (*Helix pomum* Pfeiffer 1842 = *Helix durvillii* Hombron & Jacquinot 1841) [10 + 4 subsp.] – (Xanthomelontidae)
Genus *Zyghelix* Iredale 1937c[13] (*Helix forsteriana* Reeve 1852) [3] – (Hadridae)

*Family XANTHONYCHIDAE Strebel & Pfeffer 1879[95]
*Subfamily Bradybaeninae Pilsbry 1939
*Genus *Bradybaena* Beck 1837 (*Helix similaris* Férussac 1821) [1]

*Family HELICIDAE Rafinesque 1815
*Subfamily Helicinae
*Genus *Helix* Linnaeus 1758 (*Helix pomatia* Linnaeus 1758) [1]
*Genus *Otala* Schumacher 1817 (*Helix lactea* Müller 1774) [1]
*Genus *Theba* Risso 1826 (*Helix pisana* Müller 1774) [1]

*Family HYGROMIIDAE Tryon 1866[96]
*Genus *Cochlicella* Risso 1826 (*Helix conoidea* Draparnaud 1801) [2]
*Genus *Helicella* Férussac 1821[97] (*Helix ericetorum* Müller 1774) [6]

NOTES

[1] There are many publications which can be consulted regarding various introduced molluscs in Australia, e.g., Petterd, W.F., 1879, *J. Conchol.*, 2: 96-98; Musson, C.T., 1891, *Proc.Linn.Soc.N.S.W.*, 2nd ser., 5: 883-896; Hedley, C., 1894, *J. Malac.*, 3: 6-7; Cox, J.C. and C. Hedley, 1912, *Mem.Natn. Mus. Vict.*, 4: 5-14, pl. 1-3; Verco, J., 1924, *Rec.S.Aust.Mus.*, 2(4): 489-490; Gabriel, C.J., 1929, *Vict.Nat.*, 46(6): 130-134; Fischer, P.-H., 1939, *J. Conch. Paris*, 83: 245-253; Cotton, B.C., 1954, *Rec.S.Aust.Mus.*, 11(2): 177-187, pl. 24; Cotton, B.C., 1964, In: *South Australian national parks and wild life reserves*, W.L. Hawes, Gov. Printer, Adelaide, pp. 120-129; Quick, H.E., 1952, *Proc. Malac.Soc.Lond.*, 29: 181-189; Quick, H.E., 1953, *Proc.Malac.Soc.Lond.*, 30: 74-79; Kershaw, R.C., 1957, *Vict.Nat.*, 74: 97-100; Pomeroy, D.E. and H.M. Laws, 1967, *Rec.S.Aust.Mus.*, 15: 483-494; Smith, B.J., 1969, *Aust.Nat.Hist.*, 16(5): 162-165; Smith, B.J., 1972, *Survival*, 1: 20-21; Long, D.C., 1972, *Mem.Natn.Mus.Vict.*, 33: 115-120; Altena, C.O. van Regteren and B.J. Smith, 1975, *J.Malac. Soc.Aust.*, 3(2): 63-80.

[2] Wenz (1938: 443) put the Australian *Pleuropoma* species, *Helicina (Sulfurina) sphaeroconus* Möllendorff, into the subgenus *Sphaeroconia* Wagner 1909.

[3] Wenz (1938: 433-434) placed *Omphalorissa* Iredale 1933 as a subgenus of *Hydrocena* Pfeiffer 1847. Keen (1960: 1289) regarded *Omphalorissa* as a synonym of *Georissa* Blanford 1864 (type species: *Hydrocena pyxis* Benson 1856), which she placed as a subgenus of the genus *Hydrocena* Pfeiffer 1847 (type species: *Cyclostoma cattaroense* Pfeiffer 1841).

[4] Baker (1956b) included the Cyclophoridae as a family in the superfamily Ampullarioidea, the Cochlostomatinae and Diplommatininae both as cyclophorid subfamilies, and the Pupinini as a tribe in the cyclophorid subfamily Realiinae Gray 1852. Golikov and Starobogatov (1975: 210) regarded the Cyclophoridae, Pupinidae and Cochlostomatidae as distinct families in the superfamily Cyclophoroidea.

[5] Wenz (1938: 455) regarded *Ditropisena* as a subgenus of *Ditropis* Blanford 1869 (type species: *Cyclophorus (Ditropis) planorbis* Blanford 1869).

[6] Wenz's (1938-44) classification of the Australian Pupininae (on p. 1497 he raised the subfamily to family rank following Tielecke, 1940) was as follows: Tribe Pupinelleae, genera *Pupinella* Gray

1850 (subgenus *Pupinella* s.s.) and *Hedleya* Cox 1891; tribe Pupineae, genus *Pupina* Vignard 1829 (subgenera *Pupina* s.s., *Tylotoechus* Kobelt & Möllendorff 1897 and *Suavocallia* Iredale 1933).

[7] Wenz's (1938-44) classification of the Australian Diplommatininae (on p. 1497 he raised the subfamily to family rank following Tielecke, 1940) recognized the following generic groups: *Arinia* H. & A. Adams 1856 (subgenera *Arinia* and *Famarinia* Iredale 1933) [the latter added by Iredale 1937c to the synonymy of the pupillid (Stylommatophora) *Glyptopupoides egregia* (Hedley & Musson 1891)]), *Palaina* Semper 1865 (subgenera *Palaina* s.s., *Cylindropalaina* Möllendorff 1897 and *Macropalaina* Möllendorff 1897) and *Pseudopalaina* Möllendorff (in Kobelt & Möllendorff 1898) (subgenus *Eclogarinia* Iredale 1933).

[8] The Diplommatinidae were erroneously placed by Iredale (1937a: 300) with the pulmonate Stylommatophora. However, in 1940a he corrected the family's systematic placement. Wenz (1943: 1497), following Tielecke (1940), placed the Diplommatininae as a subfamily in the Cochlostomatidae.

[9] Wenz (1939: 485) placed *Eclogarinia* Iredale 1933 as a subgenus of *Pseudopalaina* Möllendorff (in Kobelt & Möllendorff) 1898.

[10] Both species of Veronicellidae found in Australia are probably introduced.

[11] Solem (1959a: 42) regarded *Meisenheimeria* as a synonym of *Eleutherocaulus* (sic) Simroth 1913 (type species (electotype of Pilsbry, 1919: 316): *Vaginula comorensis* Fischer 1883 = *Vaginula alte* Férussac 1823). Pilsbry (1919: 316) considered *Eleutherocaulis* to be a synonym of *Laevicaulis* Simroth 1913 (type species indicated by Pilsbry as *V. comorensis* Fischer). Baker (1925: 18) listed both *Eleutherocaulis* and *Meisenheimeria* as synonyms of *Laevicaulis,* but in 1931 remarked, "In an earlier paper (1925, NAUT. 39: 18), I followed Pilsbry's use of *Laevicaulis* in preference to *Eleutherocaulis,* but now realise that Simroth's own use (1913: 202) of the latter as the ranking term makes *Eleutherocaulis* the valid name and *Laevicaulis* the synonym." Baker regarded *Eleutherocaulis* as a subgenus of *Filicaulis* Simroth 1913 (type species: *Vaginula seychellensis* Fischer 1871).

[12] Solem (1959a: 41) used *Sarasinula* as a section of the genus *Angustipes* Colosi 1921 (type species: *Vaginula angustipes* Heynemann 1885).

[13] Genus or subgenus not included in the text of Zilch (1959-60), but simply listed by him at the end of his monograph (pp. 725-730) as one of the 265 Iredalian euthyneuran generic-group names which, because of inadequate descriptions, or lack of descriptions, and generally poor (or lacking) figures, he did not know how to palce.

[14] Placed in the synonymy of *Succinea* Draparnaud 1801 by Zilch (1959: 199). For a revision of higher classification in the Succineidae, see Patterson (1971). For a description of the reproductive anatomy of *S. australis,* see Quick (1936).

[15] According to Baker (1960, in referring to the International Commission on Zoological Nomenclature's reaffirming in 1958 "The rule that a family name is not to be changed when the type genus is found to be a synonym"), "The family names which are based on synonyms . . . [include] . . . Buliminidae, . . . Helicterinae (Achatinellidae) and Lucerninae (Camaenidae). The last two apparently have been in synonymy for 50 years [referring to the "50 year rule"] . . . Nevertheless, 'Helicteridae' was used as a heading in the Zoological Record until 1939."

[16] Zilch (1959: 131) used Tornatellinidae as a family. Taylor and Sohl (1962) followed Cooke and Kondo (1960), who concluded that the Achatinellidae and Tornatellinidae are most reasonably grouped as a single family (Achatinellidae). The subfamily groupings used here for the Australian achatinellids also follow Cooke and Kondo.

[17] Zilch (1959: 132) regarded *Tornatellinops* as a subgenus of *Lamellidea* Pilsbry 1910. However, Cooke and Kondo (1960) separated *Tornatellinops* as a distinct genus.

[18] Iredale (1937a: 301 ff.) placed all of the small pulmonate "pupoid" shells in the family Vertiginidae. In later publications (1937b, 1939, 1940a), he divided them into five families. The present placement of Iredale's listed genera in the Vertiginidae, Chondrinidae, Pupillidae and the Valloniidae follows Zilch (1959). Zilch gave full generic status to *Cylindrovertilla*, *Gyliotrachela* and *Somniopupa*, but listed as subgenera *Wallivertilla* (as a subgenus of *Cylindrovertilla*), *Australbinula* (as a subgenus of *Gastrocopta* Wollaston 1878), *Glyptopupoides* and *Themapupa* (both as subgenera of *Pupoides* Pfeiffer 1854), *Imputegla* (as a subgenus of "?*Pupisoma* Stoliczka 1873") and *Omegapilla* (as a subgenus of *Pupilla* Leach (in Fleming) 1828).

Zilch (1959: 139 ff.) followed Steenberg (1925) in the higher classification of the pupilloids, but it would seem that that system is not an improvement of Pilsbry's (1927-35) masterful analysis of the Pupillidae and their allies. For additional comments on familial level classification in the pupillids see Baker (1935). Pilsbry's (1917, 1920, 1921, 1927) subfamilial and generic classification of the Australian pupillids follows. Iredale's equivalent taxa are placed in parentheses following a dash after the appropriate taxa.

Family PUPILLIDAE – (Pupillidae + Gastrocoptidae + Cylindrovertillidae + Pupoididae + Pupisomidae)
Subfamily Gastrocoptinae – (Gastrocoptidae)
  Genus *Gastrocopta* – (*Australbinula* s.l. + *Gyrodaria*)
  Subgenus *Sinalbinula* – (*Australbinula* s.s. (in part) + *Australbinula (Westralcopta)* + *Gyrodaria*)
  Subgenus *Australbinula* – (*Australbinula* s.s. (in part))
  Genus *Gyliotrachela* – *(Gyliotrachela)*
Subfamily Pupillinae – (Pupillidae + Pupoididae)
  Genus *Pupoides* – (Pupoididae: *Themapupa* + *Glyptopupoides*)
  Subgenus *Pupoides* s.s. – *(Themapupa)*
  Subgenus *Glyptopupoides* Pilsbry 1926 – *(Glyptopupoides)*
  Genus *Pupilla* – (Pupillidae: *Omegapilla* + *Somniopupa*)
Subfamily Nesopupinae – (Pupisomidae + Cylindrovertillidae)
  Genus *Pupisoma* – (Pupisomidae: *Imputegla*)
  Genus *Cylindrovertilla* – (Cylindrovertillidae: *Cylindrovertilla* + *Wallivertilla*)

Baker (1956) arranged the nomenclature and subfamilies in the Pupillidae as follows:

PUPILLIDAE Turton 1831 (Synonym: Lauriinae Steenberg 1925)
Subfamily Vertiginirae Pilsbry 1918 (Synonym: Truncatellininae Steenberg 1925)
Subfamily Orculinae Pilsbry 1918
Subfamily Gastrocoptinae Pilsbry 1918 (Synonym: Chondrinidae Steenberg 1925)
Subfamily Pagodulininae Pilsbry 1924 (Synonym: Pagodininae Pilsbry 1918)
Subfamily Nesopupinae Steenberg 1925

[19] Originally named as a subgenus of *Cylindrovertilla* by Iredale (1937a), but later (1940a) raised to a full genus. Regarded as a subgenus of *Cylindrovertilla* by Zilch (1959: 151).

[20] Regarded as a subgenus of *Gastrocopta* Wollaston 1878 by Zilch (1959: 160).

[21] Regarded as a subgenus of *Pupoides* Pfeiffer 1854 by Zilch (1959: 167, 168).

[22] Iredale (1937c) synonymized *Famarinia* Iredale 1933 with *Glyptopupoides*.

[23] Regarded as a subgenus of *Pupilla* Leach (in Fleming) 1828 by Zilch (1959: 166).

[24] Pilsbry (1931: 80) stated, "Add to synonyms [of *Pupoides* Pfeiffer 1854] : *Themapupa* IREDALE, The Victorian Naturalist vol 47, Nov. 1930, p. 120, mt. *Pupa beltiana* Tate. – Mr.

Iredale states that 'it has no real relationship' with *Pupoides*, but he does not attempt to mention any differential character in the half page treating of *'Themapupa' beltiana*. Until such characters are indicated, there seems little reason to regard *Themapupa* seriously." Zilch (1959: 168) included *Themapupa* as a subgenus of *Pupoides*.

[25] Regarded as a subgenus of *?Pupisoma* Stoliczka 1873 by Zilch (1959: 174).

[26] The placement of *Amimopina* in the Enidae follows Solem (1964).

[27] Iredale (1937a: 306) created the family Coelocionidae for *Coelocion*, but until its relationships are thoroughly studied it would seem best to leave it where Pilsbry placed it, with the Megaspiridae.

[28] The inclusion of the Ferussaciinae and the Stenogyrinae (Subulinidae) in the Achatinidae as subfamilies follows Baker (1956a).

[29] Regarded as a subgenus of *Pseudopeas* Putzeys 1899 by Zilch (1959a: 352) and as genus *Pseudopeas* by Franc (1957: 112) and Solem (1961: 450).

[30] Zilch's (1960) classification of the Australian Rhytididae (Paryphantidae) recognized the following generic groups: *Macrocycloides* Martens 1867, *Rhytida* Albers 1860 and *Paryphanta* Albers 1850 (subgenus *Powelliphanta* O'Connor 1945). Solem (1959: 147 ff.) briefly reviewed the rhytidids (paryphantids) of the Australasian region. He "demoted Iredale's genera to sections or synonyms of previously described taxa." Smith (1971) more recently reviewed the Australian rhytidids.

[31] Included in the genus *Rhytida* Albers 1860 (type species: *Helix greenwoodi* Gray 1849) by Solem (1959a: 157) and reduced to a section of the subgenus *Ptychorhytida* Möllendorff 1903.

[32] "Doubtfully separable" from *Wainuia* Powell 1930 (Solem, 1959a: 148). "However, the anatomy [of *Melavitrina*] differs from that of the type species *Wainuia urnula* (Pfeiffer 1855) as described by Murdoch (1903)," (Smith and Kershaw, 1972). The latter authors placed *Melavitrina* in the synonymy of *Victaphanta*, and *M. fumosa* (Tenison-Woods 1878) in the synonymy of *M. milligani* (Pfeiffer 1854).

[33] "Probably *Montidelos* Iredale (1943 . . .) is synonymous [with *Strangesta*]," Solem (1959a: 157).

[34] Included in the genus *Rhytida* Albers 1860 by Solem (1959a: 157) and reduced in rank to a section of the subgenus *Rhytida* s.s.

[35] Included in the genus *Delos* Hutton 1904 (type species: *Zonites coresia* Gray 1849) by Solem (1959a: 152) and tentatively given the rank of a section in the subgenus *Delos* s.s. Solem regarded *Tasmadelos* to be a synonym of *Prolesophanta*.

[36] Regarded (tentatively) by Solem (1959a: 152) as a subgenus of *Delos*.

[37] Subsequently McLauchlan (1954a) named a 19th species, *Strangesta sanguinolenta*, from the Sugarloaf Range, New South Wales.

[38] *Torresiropa* is transferred from the Endodontidae (Iredale's Charopidae) to the Rhytididae (Iredale's Paryphantidae) following Solem (1959b), who placed it as a subgenus of *Ouagapia* Crosse 1894.

[39] Used as a section of the genus *Paryphanta* Albers 1850 (type species: *Helix busbyi* Gray 1840) by Solem (1959: 148). Smith (1968) compared the two Australian species of *Victaphanta* with the related New Zealand taxa *Paryphanta* and *Powelliphanta* and concluded that *Victaphanta* should be

considered a valid genus He (1970a) selected a neotype for *Victaphanta atramentaria* and (1970b) further reviewed the genus. Smith and Kershaw (1972) synonymized *Melavitrina* with *Victaphanta*, adding the species *M. milligani* to the latter.

[40] Iredale (1937c: 14 ff.) divided the Australian acavids into four families: Anoglyptidae *(Anoglypta)*, Caryodidae *(Caryodes)*, Pedinogyridae *(Pedinogyra)* and Hedleyellidae (*Brazieresta*, *Hedleyella*, *Pandofella* and *Pygmipanda*). Zilch's classification of the Australian acavids recognised the following generic groups, all placed in the subfamily Caryodinae: *Pedinogyra* Albers 1860, *Hedleyella* Iredale 1914, *Anoglypta* Martens in Albers 1860 and *Caryodes* Albers 1850. Iredale made a separate family for each of these genera. The other genus included in the Caryodinae by Zilch was *Macrocyclis* Beck 1837 from Chile. These relationships and classification more or less follow Pilsbry (1894).

[41] Solem (1969: 243) subordinated *Brazieresta*, *Pandofella* and *Pygmipanda* to *Hedleyella*. *Pygmipanda* was reviewed by Smith (1971).

[42] Pilsbry (1946) stated, "Upon dissecting a specimen of the Australian *Bothriembryon inflatus* (Lamarck), determined and sent by my old friend Charles Hedley, I found that its organization is distinctly that of the Bulimulinae [of the family Bulimulidae, = Orthalicidae]. There appears to be no doubt that *Bothriembryon* is a bulimulid snail, agreeing with one or another of the American genera in all of the characters investigated."

[43] Subsequently Macpherson (1951: 30) named another species, *Bothriembryon multispirus*, from Western Australia.

[44] Subsequently Cotton (1940: 42) named *Bothriembryon decresensis* from Kangaroo Island, South Australia. In Iredale's classification it would presumably go under the subgenus *Larapintembryon*.

[45] Iredale (1937a: 313 ff.) made four families of the 'endodontids,' each family comprising species relegated to various subfamilies by Zilch (1959: 203 ff): Charopidae (=Endodontinae), Flammulinidae (=Amphidoxinae), Laomidae (=Punctinae) and Stenopylidae (=Stenopylinae).

Baker (1956a) arranged the nomenclature and subfamilies in the 'endodontids' as follows:

Family PUNCTIDAE Morse 1864 (based on Punctinae Morse 1864)
    (Synonyms: Laominae Suter 1913, Patulastridae Steenberg 1925, Paralaomidae Iredale 1941a)
Subfamily Patulinae Tryon 1866
    (Synonyms: Charopidae Hutton 1884, Endodontidae Pilsbry 1895, Thysanotinae Godwin-Austen 1907, Goniodiscinae Wagner 1927, Discinae Thiele 1931)
Subfamily Phenacohelicinae Suter 1892 (based on Phenacohelicidae Suter 1892)
    (Synonyms: Otoconchinae Cockerell 1893, Amphidoxinae Thiele 1931, Flammulinidae Crosse 1894 [cf. Baker 1957], Gudeoconchidae Iredale 1944, Pseudocharopidae Iredale 1944)
Subfamily Helicodiscinae "Pilsbry" H.B. Baker 1927
Subfamily Rotadiscinae H.B. Baker 1927
Subfamily Stenopylinae Thiele 1931 ?

Solem (1973b: 166) used three families, the Charopidae, Punctidae and Endodontidae, for the "endodontoids", but in 1975 recognized two additional families, the Helicodiscidae Pilsbry 1927 and the Discidae Thiele 1931. Climo (1975) recognized one family for New Zealand, the Punctidae, with four subfamilies, the Punctinae, Phenacohelicinae, Charopinae and Otoconchinae.

[46] Zilch's (1959) classification of the Australian Endodontidae (Punctidae) follows: Subfamily Punctinae (Laominae), genera ?*Paralaoma* Iredale 1913 and *Phrixgnathus* Hutton 1883; subfamily Stenopylinae, genus *Stenopylis* Fulton 1914; subfamily Endodontinae, genera *Charopa* Albers 1860

(subgenera *Charopa* s.s., *Discocharopa* Iredale 1913 (? Austr.), *Egestula* Iredale 1915*, *Fectola* Iredale 1915*, *Mocella* Iredale 1915* and *Cavellia* Iredale 1915* [* = named by Iredale for New Zealandic species], *Gyrocochlea* Hedley 1924 and *Ptychodon* Ancey 1888 (subgenus *Rhophodon* Hedley 1924); subfamily Amphidoxinae, genus *Hedleyoconcha* Pilsbry 1893.

[47] According to Solem (1959a: 78, 79) there are essentially four types of apical sculpture found in the Pacific "Endodontinae": radial ribs only, radial ribs and spiral ribs [lirae], spiral ribs, and smooth apical whorls. "The sculpture of spiral striae is found throughout most of the Pacific. . . . In Polynesia, New Zealand, *western* Australia, the Solomon Islands, and the New Hebrides there is a larger toothless series of species which have relatively few spiral ribs on the apical whorls. The earliest name for this group seems to be *Mocella* Iredale, 1915 . . . . In New Caledonia and *eastern* Australia (including Tasmania) species with many more spiral ribs are found . . . . The radially ribbed apical sculpture is represented by two main groups, *Discocharopa* and *Ptychodon*. *Discocharopa* . . . is minute, greasy white in color, usually widely umbilicate, and either toothed or toothless (see Solem, 1957). *Ptychodon* is larger, horn-colored or flammulated, has many apertural lamellae and a narrower umbilicus. – It is probable that the west Australian species that Iredale (1937a) placed in *Luinodiscus* are not more than subgenerically separable [from *Mocella*]." [Climo (1970: 311) regarded *Mocella, Ptychodon* Ancey 1888 and *Geminoropa* Iredale 1933 to be three of the six subgenera of *Charopa* Albers 1860 (type species: *Helix coma* Gray 1843) occurring in New Zealand.]

Climo (1969) placed less emphasis on protoconch sculpture in revising the New Zealand endodontoids, giving greater weight conchologically to other characters.

[48] After Iredale's land snail publications, Gabriel (1947) and Gabriel and Macpherson (1947) named ten charopid species from Victoria: *Charopa brazenori* Gabriel & Macpherson, *C. colliveri* Gabriel, *C. illustra* Gabriel, *C. inexpectata* Gabriel, *C. jemmysensis* Gabriel, *C. lakesentranciencia* Gabriel, *C. oreana* Gabriel, *C. problematica* Gabriel, *C. snowyensis* Gabriel & Macpherson, and *Allodiscus marysvillensis* Gabriel.

[49] Solem (1972: 84) placed *Charopa bairnsdalensis* Gabriel 1930 [*Egilodonta*] in the genus *Dentherona*.

[50] Regarded as a subgenus of *Charopa* Albers 1860 by Zilch (1959: 208).

[51] Subsequently Cotton (1939a) named *Discocharopa insularis* and *Miselaoma reevesbyi* from the Sir Joseph Banks Islands, South Australia.

[52] Climo (1970: 320) regarded *Geminoropa* Iredale 1933 to be a subgenus of *Charopa* Albers 1860.

[53] Solem (1959: 78 ff.) considered apical sculpture to be of special importance in generic classification of the Pacific area "Endodontinae", and in 1960 (p. 2) stated, "The East Australian and Tasmanian species (Iredale's *Roblinella* and *Gyrocochlea*) have the same apical sculpture as the New Caledonian species [*Andrefrancia* Solem 1960], but differ in size, shape and umbilical characters."

[54] Solem (1959a: 83) suggested that the west Australian *Luinodiscus* is not more than subgenerically separable from *Mocella*, a name introduced by Iredale (1915) for New Zealand species (type species: *Helix corniculum* Reeve 1852). "*Mocella* is equivalent to *Charopa* as used in previous publications on the endodontids of Melanesia and Polynesia. *Charopa* must be restricted to New Zealand species that have smooth apical whorls. The Polynesian and Melanesian species have spirally striated apices, as do the New Zealand species that Iredale placed in *Mocella*" (Solem, loc. cit.).

[55] Iredale (1941b) suggested that *Mussonula* should be placed in a family by itself.

[56] Regarded as a subgenus of *Ptychodon* Ancey 1888 by Zilch (1959: 214).

[57] Solem (1958) added a second species to the genus *Theskelomensor, T. creon* Solem. He suggested that *Theskelomensor* is a helicarionid genus, rather than endodontid.

[58] Subsequently Cotton (1953: 25) named *Excellaoma pattisonae* from the National Park, South Australia.

[59] Zilch (1959: 207) used the subfamily name Stenopylinae. The use here of the name Helicodiscinae follows Solem (1957, 1975), although the group is conservatively left as a subfamily until a more thorough study of the "endodontoids" is published.

[60] Solem (1957: 9) placed *Planispira hemiclausa* Tate 1874 [*Stenopylis*] in the synonymy of *Plectopylis coarctata* Möllendorff 1894, which he suggested belongs, together with the eastern North American *Helicodiscus* and *Polygyriscus*, to the endodontid subfamily Helicodiscinae Pilsbry 1927. In 1975, Solem considered this group as a distinct family (Helicodiscidae): ". . . *Helicodiscus, Stenopylis* and *Polygyriscus* form a sharply defined family unit within the endodontoid complex." . . . "*Stenopylis* has a wide and unusual distribution, extending from the Philippines and Indonesia to the Solomon Islands, Queensland, the MacDonnell and Krichauff mountains in Central Australia, and northern areas of Western Australia."

[61] Iredale (1941a) removed *Hedleyoconcha* from the Flammulinidae and (1942) placed it in its own family near the Durgellinidae.

[62] Subsequently McLauchlan (1954b) named *Oxychilus tasmanicus* from Tasmania as a new species having evolved since its introduction by Europeans!

[63] The number of species in Australia (as well as the generic and subgeneric classification) of *Milax, Deroceras, Lehmannia* and *Limax* is from Altena and Smith (1975).

[64] Zilch (1959: 265) and Taylor and Sohl (1962) gave familial status to the Milacinae, but Pilsbry (1948: 563) and Baker (1956) included it as a subfamily of the Limacidae.

[65] Zilch (1959: 270 ff.) and Taylor and Sohl (1962) used a superfamily Ariophantacea, in which they included the families Trochomorphidae, Euconulidae, Helicarionidae, Ariophantidae and Urocyclidae.

[66] Hedley (1890) related *Cystopelta* to *Helicarion* and later (1892) reiterated: ". . . *Cystopelta* is a much modified and aberrant member of the Helicarionidae." Baker (1956a) included Cystopeltinae under the Euconulidae as *incertae sedis*. Incidentally, Baker (loc. cit.) also tentatively included the Helicarioninae as a subfamily of the Euconulidae (or possibly as a separate but closely related family). (In 1963, Baker ranked the Helicarioninae as a subfamily of the Euconulidae).

[67] Zilch (1959) referred only one Australian genus to the Euconulidae, *Durgellina* Thiele 1928 (Euconulinae). (The introduced *Euconulus fulvus* (Müller) also, of course, belongs to the Euconulinae.) However, Zilch did not know how to place most of Iredale's Australian land snail genera. Further, Zilch took a narrower view of the Euconulidae than did Baker. Baker (1956a,c, 1957) arranged the Euconulidae (including the 'microcystids', etc.), its tribes and subfamilies (or possibly closely related families, depending on the weight given familial group taxonomic units) as given below. (Regarding nomenclature of pulmonate familial names as presented in his (1956a,c, 1957, 1960) four papers on this subject, Baker (1960) stated, "In any case, please do not quote my 4 lists for the 'acceptance' of any of the changes involved.")

Family EUCONULIDAE Clessin 1879
(Synonyms: Conulinae Strebel & Pfeffer 1879, Durgellinidae Iredale 1941c, Hedleyoconchidae Iredale 1942, Coneuplectinae Habe 1948)

Subfamily or tribe: Microcystinae Thiele 1931
    (Synonyms: Trochonaninidae Germain 1921, Liardetiae H.B. Baker 1938, Philonesiae H.B. Baker 1938, Fanulidae Iredale 1945, Advenidae Iredale 1945)
Family or primary subfamily: Xestinae Gude & Woodward 1921
    (Synonyms: Naninidae "Pfeffer" Martens 1880, Ariophantinae Godwin-Austen 1888, Hemiplectinae Gude & Woodward 1921)
Subfamily or tribe: Macrochlamydinae Godwin-Austen 1888
    (Synonym: Tanychlamydinae H.B. Baker 1928)
Subfamily or tribe: Durgellinae Godwin-Austen 1888
    (Synonyms: Sitalinae Sykes 1900, Ostracolethidae Simroth 1901, Myotestidae Collinge 1902)
Subfamily or tribe: Parmarioninae Blanford & Godwin-Austen 1908
Subfamily or tribe: Dyakinae Gude & Woodward 1921
    (Synonyms: Staffordiinae Thiele 1931, Pseudoplectinae Thiele 1934)
Subfamily or tribe: Girasiinae Collinge 1902
Family or primary subfamily: Helicarioninae Godwin-Austen 1888
    (Synonyms: Pseudotrochatellinae Wagner 1905, Ereptinae Godwin-Austen 1908)
Subfamily or tribe: Sesarinae Thiele 1931
    (Synonyms: Kaliellinae Thiele 1931, Geotrochidae Iredale 1941c, Nitoridae Iredale 1937c)
Family or primary subfamily: Urocyclinae Simroth 1889
Incertae sedis: Cystopeltinae Cockerell 1891
Incertae sedis: Sophininae Blanford & Godwin-Austen 1908
Incertae sedis: Chroninae Thiele 1931

Baker (1963: 233-240) recognized the following limacoid families (those with asterisks occur naturally (*) or have been introduced (**) in Australia):

Limacoidea
EUCONULIDAE* (Synonym: Helixarionidae)
VITRINIDAE** (Synonym: Zonitidae)
LIMACIDAE**
TRIGONOCHLAMYDIDAE
SCOLODONTIDAE (Synonym: Systrophiidae)
ARIOPHANTIDAE (Synonym: Xestidae) (* if *Cystopelta* belongs to the Ariophantidae rather than to the Helicarionidae; see note 66)
UROCYCLIDAE

[68] In his family Microcystidae, Iredale (1937c: 3 ff.) placed the genera *Alienitor, Dendronitor, Echonitor, Expocystis, Melocystis, Periclocystis, Tarocystis* and *Westracystis*. He (1941b) later transferred *Melocystis* to the Nitoridae. All of these genera, together with those Iredale included in his family Durgellinidae, are here placed in the Euconulidae (Microcystinae).

[69] Named as a new Australian genus for an introduced species! "The species so-called by Cox is a small Zonitid of distinct appearance, recalling extralimital forms rather than the local *Nitor-Microcystis* series, being especially separable by the open umbilicus, and the straight, not reflected columella. It may yet prove to belong to an alien group, hence the name to keep this suggestion under consideration." (Iredale, 1937c: 6).

[70] Subsequently McLauchlan (1954b) named *Alienitor lyndhurstoides* from Sydney, New South Wales, as a new species having evolved since introduction by Europeans!

[71] Iredale (1937c: 11 ff.) used the family name Durgellidae [Godwin-Austen 1888] for *Durgellina* Thiele 1928 (the type species is *D. vitrina* Thiele 1928 from the Bismarck Archipelago) and its allies, which here are placed in the Euconulidae. Godwin-Austen's Durgellinae was based on *Durgella* Blanford 1863. Iredale (1941c: 66) later changed the family name to Durgellinidae. Baker (1941: 232-233) placed *Durgellina*, and questionably *Turrisitala* ["Recently (1937), Iredale has erupted again with additional Australian synonyms"], in the synonymy of *Coneuplecta* Möllendorff 1893

(type species: *Euplecta scalarina* = *Helix scalarina* Pfeiffer 1851, from the Philippines (Leyte)). He placed *Durgellina vitrina* in the synonymy of *Helix* [*Coneuplecta*] *calculosa* Gould 1852.

[72] Baker (1963: 233) subordinated Helicarionidae as a subfamily of the Euconulidae.

[73] Zilch's (1959) classification of the Australian Helicarioninae recognized the following generic groups: *Helixarion* Férussac 1821 (subgenera *Fastosarion* Iredale 1933, *Luinarion* Iredale 1933 and *Vercularion* Iredale 1933) and *Parmacochlea* Smith 1884.

[74] Baker (1941: 265) placed (questionably) *Fastosarion, Luinarion* and *Vercularion* in the synonymy of *Helicarion*.

[75] Zilch (1959: 309) listed *Fastosarion, Luinarion* and *Vercularion* as subgenera of *Helixarion* Férussac 1821, and considered *Helicarion* Férussac 1822 to be a synonym of *Helixarion*. However, as stated by Watson (1920: 110), "On pp. 19 and 20 (or 23 and 24) [of Férussac, 1821], this word [*Helicarion*] is misspelt *Helixarion;* but on p. 67 (or 71) of the same work Férussac himself corrected this blunder, and it would seem to be a pity to ignore his correction . . ."

[76] Solem (1966: 24) contended that "Baker's division into two 'restricted subfamilies' – Helicarioninae with a retractor caecum and 'Sesarinae' with only an apical lime-sac or flagellum on the epiphallus – does not seem warrented at present." *Malandena* was placed by Solem in the "true Helicarioninae," along with a number of Australian, Pacific Island and other taxa, and "probably most of Iredale's uncharacterized generic names."

[77] Placed in the synonymy of *Nitor* by Zilch (1959: 303).

[78] Iredale divided the Australian camaenids into the families Chloritidae, Hadridae, Papuinidae, Planispiridae, Rhagadidae and Xanthomelontidae. In regard to the Papuinidae, Clench & Turner (1962: 4) commented as follows. "Iredale (Australian Zoologist, 9: 91, Nov. 1938) gave family status to the genus *Papuina* v. Martens and the few genera originally associated with it. No differential characters are given, either based on the morphology of the shell or on any of the soft parts, to separate this group from the family Camaenidae. In this and in a subsequent publication (Australian Zoologist, 10: 874-85, Dec. 1941) a large number of genera are proposed, apparently chosen at random, with type species selections for fixation. Few or no relationships are given for these various genera, and the descriptive diagnoses for the genera concerned are remarkable for their brevity. In other words, the entire burden of proving the taxonomic value of these genera will rest upon subsequent workers. This will be difficult. In the first place, specimens of Iredale's many new species will be needed and these should be preserved in alcohol, for anatomical work is needed in order to have a proper understanding of the interrelationships of these 'genera'.

"We do not intend to minimize the fact that *Papuina* in the broad sense is a complex assemblage of generic elements and should, when the necessary data are at hand, be split into as many genera as the data warrant. We do hold, however, that to create arbitrarily a host of new names without giving the necessary supporting facts is both poor taxonomy and unsound biology."

Zilch (1960) divided the Camaenidae into three subfamilies, and placed all the Australian genera in the subfamily Camaeninae. Zilch's (1960) classification of the Australian camaenids (somewhat less conservative than Pilsbry's) recognized the following generic groups: *Planispira* Beck 1837 (subgenera *Cristigibba* [if *Helix wesselensis* Cox 1868 belongs to *Cristigibba* as Iredale contended] and *Trachiopsis* Pilsbry 1893, *Chloritis* Beck 1837 (subgenus *Austrochloritis* Pilsbry 1891), *Thersites* Pfeiffer 1855 (subgenera *Thersites* s.s., *Hadra* Albers 1860, *Sphaerospira* Mörch 1867, *Glyptorhagada* Pilsbry 1890, *Sinumelon* Iredale 1930, *Badistes* Gould 1862 and *Rhagada* Albers 1860), *Xanthomelon* Martens in Albers 1860, *Angasella* Adams & Angas (subgenera *Angasella* and *Baudinella* Thiele 1931) and *Papuina* Martens in Albers 1860 (subgenus *Rhynchotrochus* Möllendorff 1895). This classification is essentially that of Pilsbry (1894), except that in the genus *Thersites* Pilsbry's categories are raised one rank higher.

Pilsbry (1894: 126) stated, "The various sections [subgenus *Thersites*, sections *Thersites* s.s., *Glyptorhagada, Badistes, Hadra* and *Sphaerospira*, and subgenera *Xanthomelon* and *Rhagada*] assembled under the generic term *Thersites* form a very homogeneous group, the extreme forms being well connected by a chain of intermediate species, *Xanthomelon* and *Rhagada* forming outlying or satellite groups of slightly greater systematic value than the other sections, but still intimately allied. The shell varies from thin light forms like *corneovirens* through a series of transition species to the solid, richly dyed *blomfieldi, mitchellae* and *bipartita*; and by other chains of almost unbroken continuity, the globose forms are connected with the keeled *richmondiana* and *kooringensis*. The soft anatomy fully sustains these conclusions. – The genus *Thersites* is allied to *Chloritis*, and might without any great violence be united to that genus; but it will probably prove an aid to clear and correct thinking to retain the two separate." Pilsbry (loc. cit.) emphasized several times the uniformity in soft anatomy of the subgroups in *Thersites* (e.g., p. 136, "The anatomy [of *Rhagada*] offers no deviation of any importance from that of *Hadra* and *Chloritis*.").

Iredale's tendency to excessively sub-divide taxa is perhaps no where better illustrated than in the genus *Thersites*, already rather carefully studied by Pilsbry (and to some extent by Hedley). From the Australian members of this one genus (as recognized by Pilsbry) alone, Iredale erected three families and 46 genera (". . . some attempt must be made to introduce order . . .")!

[79] Zilch (1960: 618) synonymized *Annakelea* under *Thersites* s.s. He placed *Rhagada, Badistes* Gould 1862, *Sinumelon, Glyptorhagada, Sphaerospira* and *Hadra* as subgenera of *Thersites* Pfeiffer 1855. Both he and Iredale (1938) synonymized *Notobadistes* Cotton & Godfrey 1932 under *Sinumelon*, and *Eximiorhagada* Iredale 1933 and *Halmatorhagada* Iredale 1933 under *Glyptorhagada*.

[80] Although Iredale (1937b, 1939) placed his Dipnelicidae (comprising the genera *Dipnelix* and *Annoselix*) between the Laomidae (= Paralaomidae) and the Charopidae, Baker (1956c) stated (under *Lucerna* (Camaenidae)), "Add Dipnelicidae I., 1937, to his synonyms."

[81] Zilch placed *Austrochloritis* as a subgenus of *Chloritis* Beck 1837. He synonymized *Patrubella* Iredale 1938 and *Nannochloritis* Iredale 1938 with *Austrochloritis*.

[82] Zilch (1960: 619) placed *Baudinella* as a subgenus of *Angasella*. He considered *Pleuroxia* to be a synonym of *Angasella* Adams & Angas 1864. But, Iredale (1938: 106) pointed out that "*Angasella* Angas, Proc.Zool.Soc.(London), 1863, p. 521 April 20, 1864, ex A. Adams MS. [is] . . . not *Angasiella* Crosse, Journ. de Conch., Vol. xii, p. 50, footnote, January 1, 1864". Both Zilch (loc. cit.) and Iredale (1938: 109) considered *Gonobaudinia* Iredale 1933 to be a synonym of *Baudinella*.

[83] McMichael (1959) described a new genus and new species of Queensland land snail, *Craterodiscus pricei*, which he temporarily assigned to the family Helicarionidae ("Eventually the true family position of this species may be revealed by anatomical and radular study"). Solem (1973a) studied aspects of the soft anatomy and the radula of *C. pricei* and concluded that it is a very primitive camaenid.

[84] Zilch placed *Cristigibba* and *Trachiopsis* as subgenera of *Planispira* Beck 1837 (type species: *Helix zonaria* Linnaeus 1767), and he considered *Australgibba* Iredale 1933 to be a synonym of *Cristigibba*.

[85] Subsequently Macpherson (1954: 56) named *Dipnelix alychnopis* from Mondrain Island, Recherche Archipelago.

[86] Subsequently Cotton (1953: 25) named *Glyptorhagada umberatana* from Umberatana, northern South Australia.

[87] Subsequently McLauchlan (1954a) named *Meridolum bowdenae* and *M. middenense* from New South Wales.

[88] Zilch placed *Rhynchotrochus* as a subgenus of *Papuina* Martens (in Albers) 1860, and both he and Iredale (1938) synomymized *Papuexul* Iredale 1933 and *Noctepuna* Iredale 1933 (type species: *Helix poiretiana* Reeve 1852) with *Rhynchotrochus*. Later, Iredale (1943) again recognized *Papuexul* as distinct. McMichael (1958) recognized *Noctepuna* as a distinct genus and transferred *Posorites muensis* (Hedley 1912) to *N. poiretianus* as a subspecies, and named an additional subspecies, *N. p. clenchi*. Clench and Turner (1966: 82) placed *R. macgillivrayi* (Forbes 1852) in the subgenus *Pompalabia* Iredale 1941c[13] (type species: *Helix naso* Martens 1883).

[89] Subsequently Cotton (1939b: 5) named *Pleuroxia cooperi* from North Flinders Range, South Australia.

[90] Subsequently Cotton (1953: 26) named *Pleuroxia ruga* from Cape Range, Western Australia.

[91] Placed in the synonymy of *Rhachista* Connolly 1925 (type species: *Buliminus rhodotaenius* Martens 1901) by Solem (1959a: 60) and included in the family Enidae.

[92] Iredale (1938) synonymized *Catellotrachia* Iredale 1933 and *Spernachloritis* Iredale 1933 under *Semotrachia*.

[93] Subsequently Cotton (1940) named "*Notobadistes*" *cooperi* from Kangaroo Island, South Australia.

[94] Iredale (1937c) synonymized *Figuladra* Iredale 1933 with *Varohadra*.

[95] Zilch (1960: 626) and Taylor and Sohl (1962) used the family name Bradybaenidae Pilsbry 1939 (= Fruticicolidae Lindholm 1927, = Eulotidae Wenz 1923). The use of Xanthonychidae here with Bradybaeninae as a subfamily follows Baker (1963: 244).

[96] Zilch (1960: 665, 680) included the hygromiids (helicellids) as several subfamilies of the Helicidae, a procedure followed by Taylor and Sohl (1962). The separation of the hygromiids (including the Helicellinae Wenz 1923) from the helicids in the present list follows Baker (1956: 132; 1963: 254).

[97] The generic and subgeneric classification used here for *Helicella* follows Cotton (1954: 180-181) and is rather conservative. Cotton used as subgenera *Xerocincta* Monterosato 1892 for *H. neglecta* (Draparnaud 1805), *Cernuella* Schlüter 1838 for *H. virgata* (DaCosta 1779), *Candidula* Kobelt 1871 for *H. caperata* (Montagu 1803), and *Microsceromagna* [*Microxeromagna*] Ortiz de Zarate 1950 for *H. stolismena* (Bourguignat 1880). A more modern approach was followed by Zilch (1960: 666-667), who raised *Candidula* and *Cernuella* to generic rank and included *Xerocincta* and *Microxeromagna* as subgenera of *Cernuella*. Zilch (1960: 668) listed *H. itala* Linnaeus 1758 as the type species of *Helicella*.

ACKNOWLEDGEMENTS

Grateful acknowledgement is made to Anne Gismann, Winston Ponder and Brian Smith for reading and commenting on the manuscript, to Phillip Colman and Charlotte Short for proof-reading it, and to Peggy Burch for many hours of devoted help in its preparation.

REFERENCES

ALTENA, C. O. van REGTEREN, and B. J. SMITH, 1975. Notes on introduced slugs of the families Limacidae and Milacidae in Australia, with two new records. *J. Malac. Soc. Aust.*, 3(2): 63-80.

BAKER, H. B., 1925. Nomenclature of Veronicellidae (Vaginulidae). *Nautilus*, 39(1): 13-18.

——— 1931. Notes on West Indian Veronicellidae. *Nautilus*, 44(4): 131-137.

——— 1935. Review of the anatomy of Pupillidae and related groups. In: Pilsbry, H. A., 1927-35, *Manual of conchology*, Vol. 28, pp. 191-209, pl. 26-31.

——— 1941. Zonitid snails from Pacific islands. Parts 3 and 4. 3. Genera other than Microcystinae. 4. Distribution and indexes. *Bernice P. Bishop Mus. Bull.*, 166: 205-370.

——— 1956a. Family names in Pulmonata. *Nautilus*, 69(4): 128-139.

——— 1956b. Familial names for land operculates. *Nautilus*, 70(1): 28-31.

——— 1956c. Families of Pulmonata. *Nautilus*, 70(1): 34.

——— 1957. Families of Pulmonata, No. 3. *Nautilus*, 70(4): 141-142.

——— 1960. Family names in Pulmonata, 4. *Nautilus*, 73(3): 114-117.

——— 1963. Type land snails in the Academy of Natural Sciences of Philadelphia. Part II. Land Pulmonata, exclusive of North America north of Mexico. *Proc. Acad. Nat. Sci. Philad.*, 115(8): 191-259.

BURCH, J. B., 1976. Iredale's classification of Australian land molluscs. *J. Conchyliol.*, 113 (in press).

CLIMO, F. M., 1970. Classification of New Zealand Arionacea (Mollusca: Pulmonata). III. A revision of the genera *Charopa* Albers, 1860 (excluding subgenus *Ptychodon* Ancey, 1888), *Phenacaropa* Pilsbry, 1893 and *Flammocharopa* n. gen. (Endodontidae: Endodontinae). *Rec. Dominion Mus.*, 6(18): 285-366.

——— 1975. The land snail fauna. In: Kuschel, G. (Ed.), *Biogeography and ecology in New Zealand*. W. Junk, The Hague. pp. 459-492.

CLENCH, W. J., and R. D. TURNER, 1962. Monographs of the genera *Papustyla, Forcartia* and *Meliobba* (Papuininae: Camaenidae). *J. Malac. Soc. Aust.*, 1(6): 3-33.

——— 1966. Monograph of the genus *Rhynchotrochus* (Papuininae: Camaenidae). *J. Malac. Soc. Aust.*, 1(9): 59-95.

COOKE, C. M. Jr. and Y. KONDO, 1960. Revision of Tornatellinidae and Achatinellidae (Gastropoda, Pulmonata). *Bernice P. Bishop Mus. Bull.* 221, 303 pp.

COTTON, B. C., 1939a. Mollusca, Part 2; General. pp. 159-176, pl.7. In: The Sir Joseph Banks Islands. Reports of the expedition of the McCoy Society for Field Investigation and Research. Part 2. *Proc. R. Soc. Vict.*, 51(1): 141-186, pl. 7-10.

——— 1939b. Land shells from the Northern Flinders Range. *S. Aust. Nat.*, 20(1): 3-6.

——— 1940. The land shells of Kangaroo Islands. *S. Aust. Nat.*, 20(3): 40-43.

——— 1953. New species and records of Mollusca from South Australia. *Trans. R. Soc. S. Aust.*, 76: 21-26, pl. 2-3.

——— 1954. A catalogue of introduced snails and slugs in Australia. *Rec. S. Aust. Mus.*, 11(2): 177-187.

FRANC, A., 1957. Mollusques terrestres et fluviatiles de l'Archipel Néo-Caledonien. *Mém. Mus. Natn. d'Hist. Nat.*, n.s., sér. A, zool., 13: 1-200, pl. 1-24.

GABRIEL, C. J., 1947. Additions to and alterations in the catalogue of the land shells of Victoria (including descriptions of new species). *Mem. Natn. Mus. Vict.*, 15: 109-125, pl. 9-10.

GABRIEL, C. J. and J. H. MACPHERSON 1947. Mollusca, pp. 158-167, pl. 13, In: A preliminary report on the biology and ecology of the Snowy River area in northeastern Victoria. *Mem. Natn. Mus. Vict.*, 15: 146-171, pl. 11-13.

GOLOKOV, A. N. and Y. I. STAROBOGATOV, 1975. Systematics of prosobranch gastropods. *Malacologia*, 15(1): 185-232.

HEDLEY, C., 1890. On the structure and systematic position of *Cystopelta*. *Proc. Linn. Soc. N.S.W.*, 5: 44-46.

——— 1892. Remarks on Australian slugs. *Ann. Mag. Nat. Hist.*, 6th ser., 9(50): 169-171.

IREDALE, T., 1913. The land Mollusca of the Kermadec Islands. *Proc. Malac. Soc. Lond.*, 10: 364-388.

——— 1914. On some invalid molluscan generic names. *Proc. Malac. Soc. Lond.*, 11: 170-178.

——— 1915. A commentary on Suter's "Manual of the New Zealand Mollusca." *Trans. New Zealand Inst.*, 47: 417-497.

——— 1929. Queensland molluscan notes, No. 1. *Mem. Queensland Mus.*, 9: 261-297, pl. 30-31.

——— 1930. Notes on some desert snails. *Vict. Nat.*, 47: 118-120.

——— 1933. Systematic notes on Australian land snails. *Rec. Aust. Mus.*, 19: 37-59.

——— 1936. List of papers by Charles Hedley. *Proc. Linn. Soc. N.S.W.*, 61: 214-220.

——— 1937a. A basic list of the land Mollusca of Australia. *Aust. Zool.*, 8(4): 287-333.

——— 1937b. An annotated check list of the land shells of south and central Australia. *S. Aust. Nat.*, 18: 6-56, pl. 1-2.

——— 1937c. A basic list of the land Mollusca of Australia. Part II. *Aust. Zool.*, 9(1): 1-39, pl. 1-3.

——— 1938. A basic list of the land Mollusca of Australia. Part III. *Aust. Zool.*, 9(2): 83-124, pl. 12-13.

——— 1939. A review of the land Mollusca of Western Australia. *J. R. Soc. W. Aust.*, 25: 1-88, pl. 1-5.

——— 1940a. Guide to the land shells of New South Wales. *Aust. Nat.*, 10: 227-236.

——— 1940b. A New Guinea land snail in Queensland. *Aust. Nat.*, 10: 239-240.

——— 1940c. The land-shell *Hedleya*. *N. Queensland Nat.*, 8(62): 1-2.

——— 1941a. Guide to the land shells of New South Wales. Part II. *Aust. Nat.*, 10: 262-269.

——— 1941b. Guide to the land shells of New South Wales. Part III. *Aust. Nat.*, 11: 1-8.

——— 1941c. A basic list of the land Mollusca of Papua. *Aust. Zool.*, 10(1): 51-94, pl. 3-4.

——— 1942. Guide to the land shells of New South Wales. Part IV. *Aust. Nat.*, 11: 33-40.

——— 1943. Guide to the land shells of New South Wales. Part V. *Aust. Nat.*, 11: 61-69.

——— 1944. The land Mollusca of Lord Howe Island. *Aust. Zool.*, 10(3): 299-334, pls. 17-20.

——— 1945. The land Mollusca of Norfolk Island. *Aust. Zool.*, 11(1): 46-71, pl. 2-5.

——— 1958a. John (William) Brazier. *Proc. R. Zool. Soc. N.S.W.*, 1956-57: 105-118.

——— 1958b. Charles Hedley's papers indexed. *Proc. R. Zool. Soc. N.S.W.*, 1956-57: 118-149.

——— 1959. George French Angas: The father of Australian conchology. *Aust. Zool.*, 12(4): 362-371.

KEEN, A. M. 1960. In: Knight, J. B., L. R. Cox, A. M. Keen, R. L. Batten, E. L. Yochelson and R. Robertson. Systematic descriptions, pp. I169-I331, In: Moore, R. C. (Ed.), *Treatise on invertebrate palaeontology*, pt. I, Moll. 1, i-xxiii + 351 pp. Univ. Kansas Press, Lawrence, Kansas, U.S.A.

LAWS, H. M. and H. MINCHAM, 1968. Bernard Charles Cotton (1905-1966). Obituary, bibliography and index of his new scientific names. *J. Malac. Soc. Aust.*, 1(11): 10-24.

MACPHERSON, J. H., 1951. Land Mollusca of the Russell Grimwade Expedition. *Mem. Natn. Mus. Vict.*, 17: 29-31.

———1954. Molluscs (sea shells and snails), pp. 55-63. In: Willis, J. H. (Ed.), The Archipelago of the Recherche. *Aust. Geogr. Soc. Reps.*, 1: 1-63, map

——— 1963. Charles John Gabriel. 1879-1963. *J. Malac. Soc. Aust.*, 1(7): 3-6.

McLAUCHLAN, C. F., 1954a. Three new land snails from New South Wales. *Aust. Zool.*, 12(1): 39.

——— 1954b. Land shells originally introduced. *Aust. Zool.*, 12(1): 40.

McMICHAEL, D. F., 1958. A new tree-snail from north Queensland. *J. Malac. Soc. Aust.*, 1(2): 41-43.

———1959. A new genus and species of land snail from north Queensland. *J. Malac. Soc. Aust.*, 1(3): 31-32.

PATTERSON, C. M., 1971. Taxonomic studies of the land snail family Succineidae. *Malac. Rev.*, 4(2): 131-202.

PILSBRY, H. A., 1894. *Manual of conchology*. Structural and systematic. Vol. 9 (Helicidae Vol. 7). xlviii + 366 pp., 71 pls., Conch. Sect., Acad. Nat. Sci. Philad.

———1916-18. *Manual of conchology* (2nd ser.: Pulm.). Vol. 24. Pupillidae (Gastrocoptinae). xii + 380 pp., pl. 1-49. Conch. Dept., Acad. Nat. Sci. Philad.

———1919. A review of the land mollusks of the Belgian Congo chiefly based on the collections of the American Museum Congo expedition, 1909-1915. *Bull. Amer. Mus. Nat. Hist.*, 40(1): 1-370.

——— 1920-21. *Manual of conchology* (2nd ser.: Pulm.). Vol. 26. Pupillidae (Vertigininae, Pupillinae). iv + 254 pp., pl. 1-24. Conch. Dept., Acad. Nat. Sci. Philad.

——— 1927-35. *Manual of conchology* (2nd ser.: Pulm.). Vol. 28. Geographic distribution of Pupillidae; Strobilopsidae, Valloniidae and Pleurodiscidae. xii + 226 pp., pl. 1-31. Conch. Dept., Acad. Nat. Sci. Philad.

———1946. Notes on the anatomy of Australian and Galápagos Bulimulidae (Mollusca, Pulmonata). *Notulae Naturae*, 168: 1-4.

PONDER, W. F and P. J. STANBURY, 1972. Type specimens in the Macleay Museum, University of Sydney. 6. Molluscs. *Proc. Linn. Soc. N.S.W.*, 97(1): 42-55.

QUICK, H. E., 1936. The anatomy of some African Succineae, and of *Succinea hungarica* Hazay and *S. australis* Férussac for comparison. *Ann. Natal Mus.*, 8(1): 19-45, pl. 1-4.

RICHARDSON, J. E., 1971. Dr. James Charles Cox — conchologist (1834-1912). Bibliography of natural history papers with an index to his scientific names. *Aust. Zool.*, 16(2): 71-83.

SMITH, B. J., 1969. A comparative study of two Australian paryphantid snails, with notes on their taxonomic relationships. *Proc. Symp. Moll.*, Mar. Biol. Assoc. India, Pt. 1: 164-169.

———1970a. Notes on the anatomy of *Victaphanta atramentaria* (Shuttleworth) and *V. compacta* (Cox and Hedley), and the designation of a neotype for *V. atramentaria*. *J. Malac. Soc. Aust.*, 2(1): 13-21.

——— 1970b. Victorian non-marine molluscs — 1. *Vict. Nat.*, 87: 248-249.

——— 1971a. Carnivorous snails of the family Paryphantidae. *Aust. Nat. Hist.*, 17(2): 55-58.

——— 1971b. Victorian non-marine molluscs — 4. *Vict. Nat.*, 88: 155.

SMITH, B. J. and R. C. KERSHAW, 1972. Tasmanian snail referred to the genus *Victaphanta* (Stylommatophora: Paryphantidae). *Mem. Natn. Mus. Vict.*, 33: 111-114.

SMITH, B. J. and J. H. BLACK (MACPHERSON). 1969. Biographies, combined bibliography and new names list of John Henry Gatliff (1848-1935) and Charles John Gabriel (1879-1963). *J. Malac. Soc. Aust.*, 1(12): 32-47.

SOLEM, A. 1957. Philippine snails of the family Endodontidae. *Fieldiana* (Zool.), 41(1): 1-12.

——— 1958. New land snail from Queensland. *Nautilus*, 72(1): 20-22, pl. 3, fig. 1-6.

——— 1959a. Systematics of the land and fresh-water Mollusca of the New Hebrides. *Fieldiana* (Zool.), 43: 1-234, pl. 1-34.

——— 1959b. On the family position of some Palau, New Guinea, and Queensland snails. *Arch. Molluskenk.*, 88(4/6): 151-158, pl. 12-13.

——— 1960. New Caledonian non-marine snails collected by T.D.A. Cockerell in 1928. *Notulae Naturae*, (338): 1-9.

——— 1961. New Caledonian land and fresh-water snails. *Fieldiana* (Zool.), 41(3): 415-501.

——— 1964. *Amimopina*, an Australian enid land snail. *Veliger*, 6(3): 115-120.

——— 1966. Some non-marine mollusks from Thailand, with notes on classification of the Helicarionidae. *Spolia Zool. Mus. Haun.*, 24: 7-110, pl. 1-3.

——— 1969. Basic distribution of non-marine molluscs. *Proc. Symp. Moll.*, Mar. Biol. Assoc. India, Pt. 1, pp. 231-247.

——— 1972. Microarmature and barriers in the aperture of land snails. *Veliger*, 15(2): 81-87, fig. 1-24.

——— 1973a. *Craterodiscus* McMichael, 1959, a camaenid land snail from Queensland. *J. Malac. Soc. Aust.*, 2(4): 377-385.

——— 1973b. Convergence in pulmonate radulae. *Veliger*, 15(3): 165-171, fig. 1-21.

——— 1975. *Polygyriscus virginianus* (Burch, 1947), a helicodiscid land snail (Pulmonata: Helicodiscidae). *Nautilus*, 89(3): 80-86.

TAYLOR, D. W. and N. F. SOHL, 1962. An outline of gastropod classification. *Malacologia*, 1(1): 7-32.

TIELECKE, H., 1940. Anatomie, Phylogenie and Tiergeographie der Cyclophoriden. *Arch. Naturgesch.*, N.F., 9: 317-371, 24 fig.

WATSON, H., 1920. The anatomy of two species of *Helicarion* from tropical Africa. *Proc. Malac. Soc. Lond.*, 14(2/3): 91-113, pl. 3-4.

WENZ, W., 1938-44. Gastropoda. Allgemeiner Teil und Prosobranchia (Amphigastropoda u. Streptoneura). In: O. R. Schindewolf, *Handbuch der Paläzoologie*, Bd. 6, Teil 1, Borntraeger, Berlin-Zehlendorf, xii + 1639 pp.

ZILCH, A., 1959-60, Gastropoda, Teil 2, Euthyneura. In: O. H. Schindewolf, *Handbuch der Paläozoologie*, Bd. 6, Teil 2, Borntraeger, Berlin-Nikolassee, xii + 834 pp.

INDEX

Acanthinulinae 131
Acavidae 131
Achatinellidae 130, 138
Achatinidae 131, 140
Advenidae 144
Alienitor 134, 144
Allocharopa 132
Allodiscus 142
Ambipupina 129
Amimopina 131, 140
Amphidoxinae 133, 141, 142
Amplirhagada 135
Andrefrancia 142
Aneitidae 130
Angasella 145, 146
Angasiella 146
Angasietta 136
Angustipes 138
Annakelea 135, 146
Annoselix 135, 146
Anoglypta 132, 141
Anoglyptidae 132, 141
Arborcinea 130
Arinia 138
Arion 133
Arionidae 133
Arioninae 133
Ariophantidae 134, 143, 144
Ariophantinae 144
Arnemelassa 135
Athoracophoridae 130
Australbinula 130, 139
Australgibba 135, 146
Austrochloritis 135, 145, 146
Austrosuccinea 130
Baccalena 135
Badistes 145, 146
Basedowena 135
Baudinella 135, 145, 146
Bellrhagada 135
Bentosites 135
Bischoffena 132
Bothriembryon 132, 141
Bothriembryontidae 132
Bradybaena 137
Bradybaenidae 147
Bradybaeninae 137, 147
Brazieresta 132, 141
Buliminidae 131, 138
Bulimulidae 132, 141
Bulimulinae 141
Calvigenia 135
Camaenidae 135, 138, 145, 146
Camaeninae 135, 145
Candidula 147
Caryodes 132, 141
Caryodidae 132, 141
Caryodinae 132, 141
Catellotrachia 147
Cavellia 142
Cecilioides 131
Cecilioidinae 131
Celatembryon 132
Ceratopoma 128
Cerinasota 130
Cernuella 147
Charopa 141, 142
Charopidae 132, 140, 141, 146
Charopinae 141
Chloritidae 135, 136, 145
Chloritis 145, 146
Chloritisanax 135
Chloritobadistes 135
Chondrinidae 130, 139
Chroninae 144
Cionella 130
Cionellidae 130
Cochlicella 137
Cochlostomatidae 129, 137, 138
Cochlostomatinae 137
Coelocion 131, 140
Coelociontidae 131, 140
Coneuplecta 144, 145
Coneuplectinae 143
Contramelon 135
Conulinae 143
Corinomala 132
Cralopa 132
Craterodiscus 135, 146
Cristigibba 135, 145, 146
Cupedora 135
Cyclophoridae 129, 137
Cyclophorinae 129
Cylindropalaina 138
Cylindrovertilla 130, 139
Cylindrovertillidae 130, 139
Cystopelta 134, 143, 144
Cystopeltidae 134
Cystopeltinae 134, 143, 144
Damochlora 135
Delinitesta 133
Delos 140
Dendronitor 134, 144
Dentherona 132, 142
Deroceras 133, 143
Desidarion 134
Dialembryon 132
Diplommatinidae 129, 138

Diplommatininae 137, 138
Diplopupina 129
Dipnelicidae 135, 146
Dipnelix 135, 146
Dirutrachia 135
Discidae 141
Discinae 141
Discocharopa 132, 142
Discomelon 135
Ditropis 137
Ditropisena 129, 137
Divellomelon 135
Dolopupina 129
Dupucharopa 132
Durgella 144
Durgellidae 144
Durgellina 143, 144, 145
Durgellinae 144
Durgellinidae 134, 143, 144
Dyakinae 144
Echonitor 134, 144
Echotrida 131
Eclipsena 134
Eclogarinia 129, 138
Egestula 142
Egilodonta 132, 142
Egilomen 132
Elasmatinidae 130
Elasmias 130
Eleutherocaulis 138
Elsothera 132
Endodontidae 132, 140, 141
Endodontinae 132, 141, 142
Enidae 131, 140, 147
Epinicium 132
Eremopeas 131
Ereptinae 144
Estopupina 129
Euconulidae 134, 143, 144, 145
Euconulinae 134, 143
Euconulus 134, 143
Eulotidae 147
Excellaoma 133, 143
Exilibadistes 135
Exiligada 135
Eximiorhagada 135, 146
Expocystis 134, 144
Famarinia 138, 139
Fanulidae 144
Fastosarion 134, 145
Fatulabia 135
Fectola 142
Ferussacia 131
Ferussaciidae 131
Ferussaciinae 140
Figuladra 147
Filicaulis 138
Findomelon 135
Flammulinidae 133, 141, 143
Flammulops 133
Fruticicolidae 147
Galadistes 135
Gantomia 136
Gastrocopta 139
Gastrocoptidae 130, 139
Gastrocoptinae 130, 139
Gastrodontinae 133
Geminoropa 132, 142
Georissa 137
Georissidae 129
Geotrochidae 144
Girasiinae 144
Globorhagada 135
Gloreugenia 135
Glyptopupoides 130, 138, 139
Glyptorhagada 135, 145, 146
Gnarosophia 135
Goniodiscinae 141
Gonobaudinia 146
Granulomelon 135
Gratilaoma 133
Gudeoconchidae 141
Gyliotrachela 130, 139
Gyrocochlea 132, 142
Gyrodaria 130, 139
Hadra 136, 145, 146
Hadridae 135, 136, 145
Halmatorhagada 146
Hartogembryon 132
Hedleya 129, 138
Hedleyella 132, 141
Hedleyellidae 132, 141
Hedleyoconcha 133, 142, 143
Hedleyoconchidae 133, 143
Helicarion 134, 143, 145
Helicarionidae 134, 141, 143, 144, 145, 146
Helicarioninae 134, 143, 144, 145
Helicella 137, 147
Helicellinae 147
Helicidae 137, 147
Helicinae 137
Helicinidae 128
Helicininae 128
Helicodiscidae 143
Helicodiscinae 133, 141, 143
Helicodiscus 143
Helicteridae 130, 138
Helix 137
Helixarion 145
Helixarionidae 144
Hemiplectinae 144
Hildapina 129

Hydrocena 137
Hydrocenidae 129
Hygromiidae 137
Idamera 136
Imputegla 131, 139
Insullaoma 133
Iotula 133
Jacksonena 136
Kaliellinae 144
Kannaropa 132
Kimboraga 136
Lacustrelix 136
Laevicaulis 138
Lamellidea 139
Laomavix 133
Laomidae 141, 146
Laominae 141
Larapintembryon 132, 141
Lauriinae 139
Lehmannia 133, 143
Leptopoma 129
Letomola 132
Liardetiae 144
Limacidae 133, 143, 144
Limacinae 133
Limacus 134
Limax 134, 143
Lopupina 129
Lucerna 146
Lucernidae 135
Luinarion 134, 145
Luinodiscus 132, 142
Macrochlamydidae 134
Macrochlamydinae 144
Macrocyclis 141
Macrocycloides 140
Macropalaina 138
Magilaoma 133
Malandena 134, 145
Megaspiridae 131, 140
Meisenheimeria 129, 138
Melavitrina 131, 140, 141
Meliobba 136
Melocystis 134, 144
Melostrachia 136
Meracomelon 136
Meridolum 136, 146
Micardista 136
Microcystidae 134, 144
Microcystinae 134, 144
Microcystis 144
Microsceromagna 147
Microxeromagna 147
Milacinae 134, 143
Milax 134, 143
Miselaoma 133, 142
Mocella 142
Modonitor 134
Montidelos 131, 140
Mulathena 133
Murphitella 131
Mussonena 136
Mussonula 133, 142
Myotestidae 144
Mysticarion 134
Namoitena 131
Naninidae 144
Nannochloritis 136, 146
Necopupina 129
Nesopupinae 130, 139
Nevelasta 134
Neveritis 136
Nitor 134, 144, 145
Nitoridae 134, 144
Noctepuna 147
Notobadistes 146, 147
Obsteugenia 136
Occirhenea 131
Occirheneidae 131
Offachloritis 136
Omegapilla 131, 139
Omphalorissa 129, 137
Opeas 131
Orculinae 139
Oreokera 133
Oreomava 133
Orthalicidae 132, 141
Ostracolethidae 144
Otala 137
Otoconchinae 141
Ouagapia 140
Oxychilus 133, 143
Pagodininae 139
Pagodulininae 139
Palaina 138
Pallidelix 136
Pandofella 132, 141
Papuexul 136, 147
Papuina 145, 147
Papuinidae 131, 136, 145
Paralaoma 133, 141
Paralaomidae 133, 141, 146
Parglogenia 136
Parmacochlea 134, 145
Parmarioninae 144
Parmavitrina 134
Parpupina 129
Parrhagada 136
Paryphanta 140
Paryphantidae 131, 140
Pasmaditta 133
Patrubella 135, 146

Patulastridae 141
Patulinae 132, 141
Pedicamista 133
Pedinogyra 132, 141
Pedinogyridae 132, 141
Peloparion 134
Periclocystis 134, 144
Pernagera 133
Perochlora 135
Phenacohelicidae 141
Phenacohelicinae 133, 141
Philonesiae 144
Phrixgnathus 141
Pillomena 133
Pitysinae 130
Planilaoma 133
Planispira 143, 145, 146
Planispiridae 135, 145
Plectopylis 143
Plectorhagada 136
Pleuropoma 129, 137
Pleuroxia 136, 146, 147
Polygyriscus 143
Pompalabia 147
Ponembryon 132
Posorites 136, 147
Powelliphanta 140
Pravinitor 134
Prisma 129
Prolesophanta 131, 140
Pseudocharopidae 141
Pseudopalaina 138
Pseudopeas 140
Pseudoplectinae 144
Pseudotrochatellinae 144
Ptychodon 142, 143
Ptychorhytida 140
Punctidae 132, 141
Punctinae 133, 141
Pupilla 139
Pupillidae 130, 139
Pupillinae 130, 139
Pupina 138
Pupinella 137, 138
Pupinelleae 137
Pupinidae 129, 137
Pupininae 129, 137
Pupisoma 139, 140
Pupisomidae 131, 139
Pupoides 139, 140
Pupoididae 130, 131, 139
Pygmipanda 132, 141
Queridomus 133
Quistrachia 136
Rachispeculum 136
Ramogenia 136
Rathouisiidae 129
Realiinae 137
Rhachista 147
Rhagada 136, 145, 146
Rhagadidae 135, 136, 145
Rhophodon 133, 142
Rhynchotrochus 136, 145, 147
Rhytida 140
Rhytididae 131, 140
Roblinella 133, 142
Rotadiscinae 141
Saladelos 131
Sarasinula 129, 138
Satagembryon 132
Scolodontidae 144
Semotrachia 136, 147
Sesarinae 134, 144, 145
Setobaudinia 136
Setomedea 133
Signepupina 129
Sinalbinula 139
Sinumelon 136, 145, 146
Sitalinae 144
Sodaleta 134
Somniopupa 130, 139
Sophininae 144
Spernachloritis 147
Sphaeroconia 137
Sphaerospira 136, 145, 146
Spurlingia 136
Staffordiinae 144
Stenacapha 133
Stenogyrinae 131, 140
Stenopylidae 133, 141
Stenopylinae 141, 143
Stenopylis 133, 141, 143
Strangesta 131, 140
Suavocallia 129, 138
Subulina 131
Subulinidae 140
Subulininae 131
Succinea 138
Succineidae 130, 138
Succineinae 130
Systrophiidae 144
Tanychlamydinae 144
Tarocystis 134, 144
Tasmadelos 131, 140
Tasmanembryon 132
Tasmaphena 131
Telembryon 132
Temporena 136
Tenuigada 136
Testacella 134
Testacellidae 134
Theba 137

Themapupa 131, 139, 140
Thersites 145, 146
Theskelomensor 133, 143
Thetagada 136
Thryasona 133
Thysanotinae 141
Tolgachloritis 136
Tornatellinidae 138
Tornatellininae 130
Tornatellinops 130, 139
Torresiropa 131, 140
Torresitrachia 136
Trachiopsis 136, 145, 146
Triboniophorus 130
Trigonochlamydidae 144
Trocholaoma 133
Trochomorphidae 143
Trochonaninidae 144
Trozena 136
Truncatellininae 139
Tumegada 136
Turbolaoma 133
Turrisitala 134, 144
Tylotoechus 138
Urocyclidae 143, 144
Urocyclinae 144
Vaginulidae 129
Vallonia 131
Valloniidae 131, 139
Valloniinae 131
Varohadra 136, 147
Velepalaina 129
Venopelita 136
Vercularion 134, 145
Veronicellidae 129, 138
Vertiginidae 130, 139
Vertigininae 139
Victaphanta 131, 140, 141
Vidumelon 136
Vitrea 133
Vitreinae 133
Vitrinidae 133, 144
Wainuia 140
Wallivertilla 130, 139
Westracystis 134, 144
Westralaoma 133
Westralcopta 130, 139
Westraltrachia 137
Xanthomelon 137, 145, 146
Xanthomelontidae 135, 136, 145
Xanthonychidae 137, 147
Xerocincta 147
Xestidae 144
Xestinae 144
Zonitidae 133, 144
Zonitinae 133
Zonitoides 133
Zyghelix 137
Zygotrachia 137